## STIC-Biotech/ChemLib

122960

From:

Whiteman, Brian

Sent:

Wednesday, May 26, 2004 7:34 AM

To:

STIC-Biotech/ChemLib

Subject:

seq search

09/475,704 Barnett et al., 12/30/99

Please search SEQ ID NO: 1, 2, 3, and 4 against us patent and us patent publication databases.

Thank you,

Brian Whiteman
Remsen, 2D14
mail box 2C18
Patent Examiner - Art Unit 1635
United States Patent and Trademark Office
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APPLICANT: SHANKEL, SUBJECT
APPLICANT: SIR MEGERE, Jan
APPLICANT: STVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 75
LENGTH: 4472
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: gp160.modUS4.delV1/V2.gag.modSF2
US-09-475-515-75
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Best Local Similarity 89.3%; Pred. No. 2.9e-173;
Matches 1347; Conservative 0; Mismatches 132; Indels 30;
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                                                                     CCCAGCCACAAGGGCCGCCCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCAACCGCCCCC 1362
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GGCCACACGCCAGGAACTGCCGCGCCCCCCCGCAAGAAGGGCTGCTGGCGCTGCGGCCGC 4198
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APPLICANT: BARNETT, Susan

APPLICANT: ZUR MEGEDE, Jan

APPLICANT: SRIVASTAVA, Indresh

APPLICANT: LIAN, Ying

APPLICANT: LIAN, Ying

APPLICANT: HARTOG, Karin

APPLICANT: LIU, Hong

APPLICANT: GREER, Catherine

APPLICANT: SELBY, Mark

APPLICANT: WALKER, Christopher

TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION

TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES

FILE REFERENCE: 1621.002

CURRENT APPLICATION NUMBER: US/09/475,515A

CURRENT FILING DATE: 1999-12-30

NUMBER OF SEQ ID NOS: 90

SEQ ID NO 76

SEQ ID NO 76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; LENGTH: 4608
; TYPE: DNA
; ORGANISM: Artificial Sequence
; PEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: gpl60.modSF162.delV2.gag.modSF2
US-09-475-515-76
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 81.0%;
Best Local Similarity 89.3%;
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                                                     GCCGCCGGCAACAGCAGCCAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTG
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Pred. No. 2.9e-173;
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                            ATCGACAAGGAGCTGTACCCCCTGACCAGCCTGCGCAGCCTGTTCGGCAACGACCCCAGC 4574
                                                                                                            CCCAGCCACAAGGGCCGCCCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCACCGCCCCC
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                                             ---AGCAAGGACCGCGAGACCCTGAACCAGCCTGAAGAGCCTGTTCGGCAACGACCCCCTG 1470
                                                                                          CCCAGCTACAAGGGCCGCCCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCACCGCCCCC
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APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: LIAN, Ying
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: gp160.modSF162.gag.modSF2
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SEQ ID NO 74
LENGTH: 4689
TYPE: DNA
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                                             ATCGAGGAGAAGGCCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGC
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Pred. No. 2.9e-173;
0; Mismatches 132;
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RESULT 5
US-09-475-515-73
; Sequence 73, Application US/09475515A
; Patent No. 6602705
; GENERAL INFORMATION:
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APPLICANT: ZUR MEGEDB, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT APPLICATION BATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 73
I.ENGTH: 4766
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OTHER INFORMATION:
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Best Local Similarity
Matches 1347; Conserv
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TYPB: DNA
ORGANISM: Artificial Sequence
FEATURE:
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                                    CAGATGCTGAAGGACACCATCAACGAGGAGGCCCGCCGAGTGGGACCGCGTGCACCCCGTG 648
                                                                        GCCACCCCCAGGACCTGAACACGATGTTGAACACGTGGGCGGCCACCAGGCCGCCATG
                                                                                                         GTGGAGGAGAAGGCCTTCAGCCCCGAGGTGATCCCCCATGTTCAGCGCCCTGAGCGAGGGC
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89.3%;
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Pred. No. 2.9e-173;
0; Mismatches 132;
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Gaps

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528 3712 468 3652 408 3592 3472

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PRODUCTION

30;

Gaps

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66 60

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Sequence 7, Application US/09475515A; Patent No. 6602705; GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
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Best Local Sim
Matches 1345;
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APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 7
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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Pred. No. 5.8e-173;
0; Mismatches 132;
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Sequence 5, Application US/09475515A; Patent No. 6602705; GENERAL INFORMATION:

APPLICANT: BARNETT, Susan

APPLICANT: ZUR MEGEDE, Jan

APPLICANT: SRIVASTAVA, Indresh

APPLICANT: LIAN, Ying

APPLICANT: HARTOG, Karin

APPLICANT: HARTOG, Karin

APPLICANT: SREER, Catherine

APPLICANT: SELBY, Mark

APPLICANT: WALKER, Christopher

TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PROFITILE REFERENCE: 1621.002

CURRENT APPLICATION NUMBER: US/09/475,515A

CURRENT FILING DATE: 1999-12-30
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; SOPTWARE: Patentin Ver. 2.
; SEQ ID NO 5
; LENGTH: 1853
; TYPE: DNA
; ORGANISM: Artificial Sequing PEATURE:
; OTHER INFORMATION: Descripother Information: HIV-Ga
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Best Local Similarity 85.8%;
Matches 1295; Conservative
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pred. No. 1.1e-160;
0; Mismatches 184;
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GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: SIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Catherine
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 78
LENGTH: 1865
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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APPLICANT: BARNETT, Susan

APPLICANT: ZUR MEGEDE, Jan

APPLICANT: SRIVASTAVA, Indresh

APPLICANT: LIAN, Ying

APPLICANT: LIAN, Ying

APPLICANT: HARTOG, Karin

APPLICANT: HARTOG, Karin

APPLICANT: HIU, Hong

APPLICANT: GREER, Catherine

APPLICANT: GREER, Catherine

APPLICANT: WALKER, Christopher

TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION

TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES

FILE REFERENCE: 1621.002

CURRENT APPLICATION NUMBER: US/09/475,515A

CURRENT FILING DATE: 1999-12-30

NUMBER OF SEQ ID NOS: 90

SEQ ID NO 6
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GENERAL INFORMATION:
                                                                                                               Query Match
Best Local Similarity
Matches 1295; Conserv
                                                                                                                                                                LENGTH: 4319
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial
OTHER INFORMATION: HIV-Gag-polymerase
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                                                                                                               Score 1114.6; DB 4;
Pred. No. 1.1e-160;
0; Mismatches 184;
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61 CTGCGCCCCGGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGGGAG 1	Query Match 69.3%; Score 1025.2; DB 4; Length 1268;  Best Local Similarity 89.6%; Pred. No. 3.5e-147;  Matches 1131; Conservative 0; Mismatches 113; Indels 18; Gaps 2;  Qy 1 ATGGGCCCGCCAGCATCCTGCGCGCGCAAGCTGGAAGCTGGAAGCATCCGC 60	; SEQ ID NO 3 ; LENGTH: 1268 ; TYPE: DNA ; ORGANISM: Artificial Sequence ; PRATURE: ; OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag ; OTHER INFORMATION: common region US-09-475-515-9	PILE REFERENCE: 1621.002 CURRENT APPLICATION NUMBER: US/09/475,515A CURRENT FILING DATE: 1999-12-30 NUMBER OF SEQ ID NOS: 90 SOFTWARE: Patentin Ver. 2.0	APPLICANT: LIAN, Ying  APPLICANT: HARTOG, Karin  APPLICANT: LIU, Hong  APPLICANT: GREER, Catherine  APPLICANT: SELBY, Mark  APPLICANT: SELBY, Mark  APPLICANT: WALKER, Christopher  TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION  TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES	Applic Applic 5602705 SRMATIC BARNET ZUR MET ZUR MET	 1507 TCACAGTAA		Db 1387 CCAGAAGAGCCTGAGCCTGACCAGCCTGAAGAGCCCTGTTCGGCAACGACCCCCTG 1470  1414AGCAAGGACCGCGAGACCCTGACCAGCCTGAAGAGCCCTGTTCGGCAACGACCCCTGT 1470	1303 CCCAGCCACAAGGGCCGCCCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCACCGCCCCC 136	QY 1243 GAGGGCCAGATGAAGGACTGCACCGAGGCGCCAGGCCAACTTCCTGGGCAAGATCTGG 1302	
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; Sequence 2, Application US/09552950
; Patent No. 6541248
; GENERAL INFORMATION:
APPLICANT: Oxford Biomedica (UK) Limited
TITLE OF INVENTION: Anti-Viral Vectors
FILE REFERENCE: 674524-2004
; CURRENT APPLICATION NUMBER: US/09/552,950
; CURRENT FILING DATE: 2000-04-20
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
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Best Local Similarity 80.7
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TYPB: DNA
ORGANISM: Artificial Sequence
FEATURE:
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 GGGCCCATCGCACCGGGCCAGATGCGTGAGCCACGGGGCTCAGACATCGCCGGAACGACT
                                                                                                              CCCCAGGACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATG
                                                                                                                                                                     GAGAAGGCTTTTAGCCCGGAGGTGATACCCATGTTCTCAGCCCTGTCAGAGGGAGCCACC
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Pred. No. 1.8e-135;
0; Mismatches 259;
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GENERAL INFORMATION:

APPLICANT: Oxford Biomedica (UK) Limited

TITLE OF INVENTION: Anti-Viral Vectors

FILE REFERENCE: 674524-2004

CURRENT APPLICATION NUMBER: US/09/552,950

CURRENT FILING DATE: 2000-04-20

NUMBER OF SEQ ID NOS: 22

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 5

LENGIH: 9772

TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificia
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                                                         US-09-552-950-5
Query Match
Best Local Similarity
Matches 1182; Conserv
                                                                                                                                                                                                                                                                    Sequence 5, Application US/09552950 Patent No. 6541248
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 Conservative
              63.5%;
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 Score 939.8; DB 4;
Pred. No. 2.7e-134;
0; Mismatches 297;
                                                                      Artificial
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                                                                    Sequence: pSYNGP
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                            Length 9772;
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                                  GCCAGCCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCAGCCACAAGGCC 1074
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                                                                                                         CTGCTGGTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCGGC 1014
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APPLICANT: The Government of the United States of Ame; TITLE OF INVENTION: MOLECULAR CLONES WITH MUTATED HIV; TITLE OF INVENTION: SIV ENV GENES
FILE REFERENCE: 2026-4287US1 HIV GAG/POL, SIV GAG & EN
CURRENT APPLICATION NUMBER: US/09/872,733A
CURRENT FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: PCT/US00/34985
PRIOR PILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: 60/173,036
PRIOR APPLICATION NUMBER: 60/173,036
PRIOR FILING DATE: 1999-12-23
NUMBER OF SEQ ID NOS: 19
SOPTWARE: Patentin Ver. 2.1
SEQ ID NO 6
                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence: DNA sequence; OTHER INFORMATION: of the construct pCMVgagpolBNKan containing a CMV; OTHER INFORMATION: promoter, a HIV gag/pol gene and a kanamycin; OTHER INFORMATION: resistance gene
US-09-872-733A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 14
US-09-872-733A-6
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                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                    Matches 1060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence FEATURE:
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US-09-184-418C-100  Query Match 49.  Best Local Similarity 69.	775 ATCTACAAGCGGIGGATCATCCTGGGCCTGAACAAGAICGTGCGGATGTACAGCCCCCGIG 834	σ <
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GENERAL INFORMATION APPLICANT: Hahn, I APPLICANT: Gao, APPLICANT: Shaw,	<b>–</b> 5	8 4
RESULT 15 US-09-184-418C-100 ; Sequence 100, Application U ; Patent No. 6492110	50	σ <b>&lt;</b>
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ISM Triticum aestivum

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Pooideae; Triticeae; Triticum.

B 1 (bases 1 to 746)

S Allard,F., Crosby,W.L., Danyluk,J., Budes,F., Frick,M., Gaudet,D.,

Genswein,B., Graf,R., Gulick,P., Hrycan,L.D., Laroche,A.,

Links,M.G., McCarthy,E.L., Monroy,A., Muzak,I., Nilson,D.,

Penniket,C., Roach,J.L. and Sarhan,F.

Punctional Genomics of Abiotic Stress In Wheat and Canola Crops

L Unpublished (2003)

Contact: Wm L Crosby

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Pax: 306 966 2033
                                                                                                                                                                                                                                         aestivum cDNA, mRNA sequence.
CK215205
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Zea mays 603608565 OSJNEC11P

Zea mays WHE3559\_C OV.109123 OV.109K04 OSJNEC140 SCVPLB2C0

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PEATURES
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This sequence is the direct result of the
Phred (default parameters). It is the raw
identification of the high quality insert
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/Clone 11b=Torticum aestivum FGAS: Library 6 CAP GATE 1"
/note=Torgan: Crown and leaf; Vector: pCMV.SPORT6; Crown
(50%) and leaf (50%) tissues from wheat cultivar Morstar
after short exposure times to low temperature in the light
and in the dark. 12 mRNA populations were combined before
constructing the library. The first 6 populations: After 7
days of growth at 20Cs from wheat cultivar Norstar after
short exposure times to low temperature in the light and
in the dark. 12 mRNA populations were combined before
constructing the library. The first 6 populations: After 7
days of growth at 20, wheat plants were transferred to 4C
in the light. 1cm crown sections and green leaf tissu were
separately harvested after 1, 3, and 6 hours of low
temperature exposure. The last 6 populations: After 7 days
of growth at 20C, wheat plants were transferred to 4C in
the dark. 1cm crown sections and green leaf tissu were
separately harvested after 1, 3, and 6 hours of low
temperature exposure. First strand synthesis in this
library was done in the presence of methylated dCTP
thereby protecting from internal cleavage with NotI. In
addition, this library used a primer for second strand
synthesis that annealed to an artificial sequence (RNA
oligo) added before first strand synthesis. Therefore when
sequences from EST generated from this library will be
masked for vector and adaptor sequences, an additional
masking step will have to be included to mask this RNA
oligo that is common to all clones (sequence
cgaCTGGAGCACGAGGACCTGACATGGACTGAAGGAGTAGAAA)."
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Query Match Best Local Similarity

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1 (bases 1 to 749)

1 (bases 1 to 749)

Anderson,O.D., Akhunov,B., Chao,S., Crossman,C., Deal,K.,

Dvorak,J., Lazo,G.R., Pham,J., Rausch,C.J., Wilson,C. and Woo,J.

The structure and function of the expressed portion of the wheat
genomes - Salt-stressed root cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BQ744212 749 bp mRNA linear EST 17-JUL-20 WHB4113_A01_A01ZS Wheat salt-stressed root cDNA library Triticum aestivum cDNA clone WHE4113_A01_A01, mRNA sequence.
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Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Olin Anderson
US Department of Agriculture, Agriculture Research Service, Pacific
West Area, Western Regional Research Center
800 Buchanan Street, Albany, CA 94710, USA
Tel: 5105595773
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bmail: oandersn@pw.usda.gov
Sequences have been trimmed
quality sequence with phred
Seq primer: SK primer
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.
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                 /dev_stage="Full tillering"
//lab_host="E. coli SOLR"
//lab_host="E. coli SOLR"
//clone lib="Wheat salt-stressed root cDNA library"
//note="Vector: Lambda Uni-ZAP XR, excised phagemid
pBluescript SK(-); Site 1: BcoRI; Site 2: XhoI; Hydroponic
pBluescript SK(-); Site 1: BcoRI; Site 2: XhoI; Hydroponic
pBluescript SK(-); Site 1: BcoRI; Site 2: XhoI; Hydroponic
pBluescript SK(-); Site 1: BcoRI; Site 2: XhoI; Hydroponic
plants grown to full tillering stage were treated with 150
mM NaCl for either 12 hours or 7 days. Root tissues of the
plants subjected to both types of treatment were collected
separately at University of California, Davis (E. Akhunov
and K. Deal in J. Dvorak's Lab). Total RNA was prepared
separately from the two samples (12h and 7day treatments),
and equal amount of RNA was then pooled. PolyA RNA was
purified from the pooled RNA, a cDNA library was made, and
the cDNA clones were in vivo excised to give pBluescript
SK(-) phagemids in J. Dvorak's lab (E. Akhunov, J. Dvorak)
at the University of California, Davis. Colony plating,
plasmid DNA preparations and DNA sequencing were performed
in the OD Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone="WHB4113_A01_A01"
/tissue_type="Roots"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/cultivar="Chinese Spring"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Triticum aestivum"
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REFERENCE
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ORGANISM
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                                                                                                                                                                   Triticum aestivum
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.

1 (bases 1 to 1064)
Allard, F., Crosby, W.L., Danyluk, J., Eudes, F., Frick, M., Gaudet, D.,
Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A.,
Links, M.G., McCarthy, B.L., Monroy, A., Muzak, I., Nilson, D.,
Penniket, C., Roach, J.L. and Sarhan, F.
Functional Genomics of Abiotic Stress In Wheat and Canola Crops
Unpublished (2003)
Contact: Wm. L. Crosby
                                                        Bioinformatics
University of Saskatchewan, Department of Computer Science 1C101 Engineering Building, 57 Campus Drive, Saskatcon, Saskatchewan, S7N 5A9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
Email: fgas_ests@cs.usask.ca
This sequence is the direct result of
Phred (default parameters). It is the
                                                                                                                                                                                                                                                                                                                                                                                                                                                          aestivum cDNA, mRNA
CK163121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CK163121 1064 bp FGAS015739 Triticum aestivum FGAS:
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    calling software calls. To aid in
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Plate: L4B007 row: C column: 11.
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                                               GCCCCCGGCCAGATGCGCGAGCCCCGGCAGCGACATCGCCGGC 708
                                                                                                                                                             ACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCCATC
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GTCGAGATCTGCCAGCTCCCCGTCGGCGACGGCATCACCCTCTGC
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/db_xref="taxon:4565"
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1 (bases 1 to 1126)
Allard, F., Crosby, W.L., Danyluk, J., Eudes, F., Frick, M., Gaudet, D., Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A., Links, M.G., McCarthy, B.L., Monroy, A., Muzak, I., Nilson, D., Penniket, C., Roach, J.L. and Sarhan, F.
Punctional Genomics of Abiotic Stress In Wheat and Canola Crops Unpublished (2003)
Contact: Wm L Crosby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             University of Saskatchewan, Department of Computer Science 1C101 Engineering Building, 57 Campus Drive, Saskatcon, Saskatchewan, S7N SA9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
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CK211108
CK211108.1 GI:39617217
RST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: fgas_ests@cs.usask.ca
This sequence is the direct result of the
Phred (default parameters). It is the raw
identification of the high quality insert
(default parameters) has been run on this
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                                                                                                             Similarity
                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="Triticum aestivum FGAS: Library 6 CAP GATE 1"
/note="Organ: Crown and leaf; Vector: pCMV.SPORT6; Crown (50%) and leaf (50%) tissues from wheat cultivar Norstar after short exposure times to low temperature in the light and in the dark. 12 mRNA populations were combined before constructing the library. The first 6 populations: After 7 days of growth at 20Cs from wheat cultivar Norstar after short exposure times to low temperature in the light and in the dark. 12 mRNA populations were combined before constructing the library. The first 6 populations: After 7 days of growth at 20, wheat plants were transferred to 4C in the light. 1cm crown sections and green leaf tissu were separately harvested after 1, 3, and 6 hours of low temperature exposure. The last 6 populations: After 7 days of growth at 20C, wheat plants were transferred to 4C in the dark. 1cm crown sections and green leaf tissu were separately harvested after 1, 3, and 6 hours of low temperature exposure. First strand 6 hours of low temperature exposure for second detries in this library used a nrimer for second detrand
                                                                                                                                                                                                       addition, this library used a primer for second strand synthesis that annealed to an artificial sequence (RNA oligo) added before first strand synthesis. Therefore when sequences from EST generated from this library will be masked for vector and adaptor sequences, an additional masking step will have to be included to mask this RNA oligo that is common to all clones (sequence (GACTGGAGGACACTGACATGGACATGGACTGGAGGAGAAA)."
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/db_xref="taxon:4565"
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Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CH673622 807 bp mRNA linear EST 09-APR-20 OSJNBe08D20.f OSJNBe Oryza sativa (japonica cultivar-group) cDNA clone OSJNBe08D20 5', mRNA sequence.
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Oryza sativa (japonica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                              Contact: Rod Wing
Arizona Genomics Institute
                                                      BACKWARD: gga aac agc tat gac cat g
Plate: 08 row: D column: 20
Seq primer: gta aaa cga cgg cca gtg
                                                                                                                                                                                                               Tel: 520 626 3967
Fax: 520 621 9288
                                                                                                                                                                                                                                                                                           Biological Sciences West, 448A, P.O. Box 210088, Tucson,
                                                                                                                                                                                                                                                                                                                  University of Arizona
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1 (bases 1 to 807)
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CB662794 821 bp mRNA 1
OSJNEd07C09.f OSJNEd Oryza sativa (japonica clone OSJNEd07C09 5', mRNA sequence.
CB662794
CB662794.1 GI:29666519
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/dev_stage="3 week"
/dev_stage="3 week"
/lab_host="DH10B"
/clone_lib="OSJNBe"
/clone_lib="OSJNBe"
/note="Vector: pBluescript II KS +; Site_1: EcoRI; Site_2:
/note="Vector: pBluescript II KS +; Site_1: EcoRI; Site_2:
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/mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="OSJNEe08D20"
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Pred. No. 2.3;
0; Mismatches 390;
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Unpublished (2003)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BACKWARD: gga aac agc tat gac cat
Plate: 07 row: C column: 09
Seq primer: gta aaa cga cgg cca gt
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University of Arizona
Biological Sciences West,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 520 626 3967
Fax: 520 621 9288
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CGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCCATCGCCCCCGGCCAGATGCGCGA
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                                                                                                                                                                                                                                                              CATGITCACCGCCCTGAGCGAGGGCCACCCCCCAGGACCTGAACACGATGTTGAACAC
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/lab_host="DH10B"
/clone_lib="OSJNEd"
/note="Vector: pBluescript II KS +; Site_1: EcoR/note="Vector: pBluescript II KS +; Site_1: EcoR
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/db_xref="taxon:39947"
/clone="OSJNEd07C09"
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/mol_type="mRNA"
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204 GCAGACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAACACCGTGGCCACCCTGTACTGCGT
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Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Spermatoideae; Oryzeae; Oryza.

1 (bases 1 to 824)
1 (bases 1 to 824)
Jantasuriyarat,C., Lu,G., Gowda,M., Hatfield,J., Zhou,B., Mazur,E.,
Kudrna,D., Dean,R., Soderlund,C., Wing,R. and Wang,G.
Large-scale identification of ESTs involved in the interaction
between rice and Magnaporthe grisea
Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CB666192 824 bp mRNA linear EST 09-1
OSJNEd12P19.f OSJNEd Oryza sativa (japonica cultivar-group)
clone OSJNEd12P19 5', mRNA sequence.
CB666192
CB666192.1 GI:29669917
EST.
                                                                                                                                                                                                                                                                              BACKWARD: gga aac agc tat gac cat g
Plate: 12 row: P column: 19
Seg primer: gta aaa cga cgg cca gtg
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                             Arizona Genomics Institute
University of Arizona
Biological Sciences West, 448A, P.O. Box 210088, Tucson,
85721-0088, USA
                                                                                                                                                                                                                                                                                                                                                                   Email: http://genome.arizona.edu
                                                                                                                                                                                                                                                                                                                                                                                   Tel: 520 626 3967
Pax: 520 621 9288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Rod Wing
                                                       Similarity
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                                          5.3%;
llarity 44.4%;
Conservative
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/mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/clone="OSJNBd12P19"
                                                                                                            /tissue_type="Leaf"
/dev_stage="3 week"
/lab_host="DH10B"
/lab_host="DH10B"
/clone_lib="OSJNBd"
/note="Vector: pBluescript II KS +; Site_1: EcoRI; Site_2:
/note="Vector: pBluescript II KS +; Site_1 EcoRI; Site_2:
                                          Score 78; DB 1
Pred. No. 2.3;
0; Mismatches
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Contact: Rod Wing
Arizona Genomics Institute
University of Arizona
Biological Sciences West, 44
85721-0088, USA
Tel: 520 626 3967
Fax: 520 621 9288
                                                                                                                                                                                                                                  Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.

1 (bases 1 to 851)
Jantasuriyarat, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E., Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.
Large-scale identification of ESTs involved in the interaction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CB645622 851 bp mRNA 1 OSJNEb07H03.f OSJNEb Oryza sativa (japonica clone OSJNEb07H03 5', mRNA sequence.
                                                                                                                                                                                  between rice and Magnaporthe 
Unpublished (2003)
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Plate: 07 row: H column: 03
Seq primer: gta aaa cga cgg cca gtg
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PCR PRimers
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                    GGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACCCT 905
                                                                                                                                                                       GACCAGCAACCCCCCATCCCCCTGGGCGACATCTACAAGCGGTGGATCATCCTGGGCCT
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CAAGCCGGTCATCCCCGACAAGTACCTCGACGAGAAGACCAT
                                                                       CCAGCACGACGAGACCGTCACCAACGACGAGATCGCCGCCGACCTCAAGGAGCACGTCAT 764
                                                                                                        GAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATCCTGGACATCAAGCAGGGCCCCCAA 863
                                                                                                                                             GTACCTCAACGACGCCGCCCATGGTCCCCGTCCGCGTCCACACCGTCCTCATCTCCAC 704
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/mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/clone="OSJNEb07H03"
/tissue_type="Leaf"
/dev_stage="3_week"
/lab_host="DH108"
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/note="Vector: pBluescript II KS +; SKhoI; 24 hrs after innoculation with
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Unpublished (2003)
Contact: Rod Wing_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
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University of Arizona
Biological Sciences West, 448A, P.O.
85721-0088, USA
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                                                                CACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAAGGCCTTCAGCCCCGAGGTGATCCC 503
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520 621 9288
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/dev_stage="3 week"
/lab_host="DH10B"
/lab_host="DH10B"
/clone_lib="OSJNEe"
/note="Vector: pBluescript II KS +; Site_1: EcoRI; Site_/note="Vector: pBluescript II KS +; Site_1: Ec
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/mol type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/clone="OSJNE607N10"
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Mismatches 389;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bioinformatics
University of Saskatchewan, Dep
1C101 Engineering Building, 57
Saskatchewan, S7N 5A9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
                                                                                                                                                                                                                                                                                                                       Bmail: fgas_ests@cs.usask.ca
This sequence is the direct result of the Phred (default parameters). It is the raw identification of the high quality insert the transport of transport of the transport of the transport of the transport of transport of the transport of transport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 1138)
Allard, P., Crosby, W.L., Danyluk, J., Budes, P., Frick, M., Gaudet, Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A., Links, M.G., McCarthy, E.L., Monroy, A., Muzak, I., Nilson, D., Penniket, C., Roach, J.L. and Sarhan, F.
Functional Genomics of Abiotic Stress In Wheat and Canola Crops Unpublished (2003)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BST
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CK163513
CK163513.1 GI:38993817
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PGAS016142 Triticum aestivum aestivum cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Wm L Crosby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Triticum aestivum (bread wheat)
                                                                                                                                                                                                                                                                           (default parameters) has been the region [8,827]. Plate: L4B008 row: P column:
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/organism="Triticum aestivum"
/mol_type="mRNA"
/db_xref="taxon:4565"
/clone_lib="Triticum aestivum FGAS: Library 4 Gate 8"
/clone_lib="Triticum aestivum FGAS: Library 4 Gate 8"
/note="Organ: Crown and leaf; Vector: pCMV.SPORT6; Aeria
/note="Organ: Crown and leaf) of wheat cultivar Norstar during
parts (crown and leaf) of wheat cultivar Norstar during
dehydration stress. 8 mRNA populations were combined
before constructing the library. The first four come from
                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                             column:
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57 Campus Drive, Saskatoon,
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CACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGGCC

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GÁCGAGGCCAACCACGGGACCTTCGACTTCGTCTTCGTGGÁCGCCGACAAGGACAACTAC

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GACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGGCCAGATGGTG

CACAAGATCGACTTCCGCGAG----GGCCCGGCGCGCTCCTGGACGCGCTGCTGGAG

GACAAGATCGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCCCGCC

GACATCAACCGCGAGAACTACGAGCTGGGGCTGCCGTGCATCGAGAAGGCCGGCGTGGCG

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Query Match
Best Local Similarity
Matches 291; Conserv
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GGCTACTCCCTGCTCGCCACCGCGCTCGCCATCCCCGACGACGGCACCATCTTGGCCATG
                                                                                                                                                  GIGGCCACCCIGTACIGCGIGCACGAGAAGAICGAGGICCGCGACACCAAGGAGGCCCIG
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REFERENCE
AUTHORS
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VERSION
KEYWORDS
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LOCUS
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                                                                                                                                                                           SOURCE
                                                                                                                                                    ORGANISM
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.

1 (bases 1 to 812)
Jantasuriyarat, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E. Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.
                                                                                                                                                                                                                                              CB681973

OSJNEf08M09.f OSJNEf Oryza sativa (japonica clone OSJNEf08M09 5', mRNA sequence.
CB681973
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766 662

rcgagarcreccadecrecederegecgacedearcacecrerecedecedeca 

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Best Local Similarity
Matches 311; Conserv
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Contact: Rod Wing
Arizona Genomics Institute
University of Arizona
Biological Sciences West, 448A, P.O. Box 210088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85721-0088, USA
Tel: 520 626 3967
Fax: 520 621 9288
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Plate: 08 row: M column: 09
Seq primer: gta aaa cga cgg cca gtg
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PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FORWARD: gta aaa cga cgg
GACCAGCAACCCCCCATCCCCGTGGGCGACATCTACAAGCGGTGGATCATCCTGGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAACACCGTGGCCACCCTGTACTGCGT 263
                                                   CCGCAAGAACGGCACCTGCCCTGGCTCAGGCCCGACGGCAAGACCCCAGGTCACCGTTGA
                                                                                GCCCCGCGGCAGCATCGCCGGCACCACCAGCACCTGCAGGAGCAGATCGCCTGGAT
                                                                                                                                              CGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCCATCGCCCCCGGCCAGATGCGCGA 683
                                                                                                                                                                           CGAGGAGATCGGCGCCGGCGACCAGGGCCACATGTTCGGCTACGCCACCGACGAGACCCC
                                                                                                                                                                                                       CGTGGGCGGCCACCAGGCCCATGCAGATGCTGAAGGACACCATCAACGAGGAGGACGCCGC
                                                                                                                                                                                                                                          CATCGAGCAGCAGTOGCCCGACATCGCGCAGGGGGGTGCACGGCCACTTCACCAAGCGCCC
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                                                                                                                                                                                                                                                                                                                                     CACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAAGGCCTTCAGCCCCGAGGTGATCCC
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                                                                                                               CATGTTCACCGCCCTGAGCGAGGGCCCCCCCCCAGGACCTGAACACGATGTTGAACAC
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/note="Vector: pBluescript
XhoI; Uninfected Control"
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/dev_stage="3 week"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
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44.3%;
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Pred. No. 3.7;
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AUTHORS
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CB684834
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                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 311; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
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CB684834.1
EST.
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Oryza sativa (japonica cultivar-group)
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CB684834 832 bp mRNA linear EST 09-APR-2003 OSJNEf14L24.f OSJNEf Oryza sativa (japonica cultivar-group) cDNA CLONE OSJNEf14L24 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FORWARD: gta aaa cga cgg cca gtg
BACKWARD: gga aac agc tat gac cat
Plate: 14 row: L column: 24
Seq primer: gta aaa cga cgg cca s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arizona Genomics Institute
University of Arizona
Biological Sciences West, 448A, P.O. Box 210088, Tucson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 832)
Jantasuriyarat, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E., Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.
Large-scale identification of ESTs involved in the interaction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: 520 626 3967
Pax: 520 621 9288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2003)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCR PRimers
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                                    GAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCCGACAAGGGCAAGGTGAGCCA 383
                                                                                                                GCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCCCCTGGACAAGATCGAGGAGGAGGA
                                                                                                                                                                              GCAGACCGGCAGCGAGGAGGCTGAAGAGCCTGTTCAACACCGTGGCCACCCTGTACTGCGT
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                                                                            CCCGGACAAGCTGTGCGACCAGGTGTCGGACGCGGTGCTCGACGCGTGCCTCGCCCAGGA
                                                                                                                                                        GCAGATAGAAATGGCGGCGGAGACGTTCCTCTTCACCTCCGAGTCCGTGAACGAGGGTCA 156
 CCCCGACAGCAAGGTGGCGTGCGAGACGTGCACCAAGACCAACATGGTGATAGTGTTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAAGCCGGTCATTCCCGACAAGTACCTCGACGAGAAGACCAT
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                                                                                                                                                                                                                                    Conservative
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                                                                                                                                                                                                                                                                                                                                 /clone lib="OSJNBf"
/note="Vector: pBluescript II KS +; Site_1: EcoRI; Site_2:
XhoI; Uninfected Control"
                                                                                                                                                                                                                                                                                                                                                                                       tissue_type="Leaf"
/dev_stage="3 week"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Oryza sativa
/mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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Pred. No. 3.
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BF259495
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                                                                                                                                                                                                                                    1 (bases 1 to 759)
Wing,R., Close,T.J., Kleinhofs,A., Wise,R., Begum,D., Frisch,D., Yu,Y., Henry,D., Palmer,M., Rambo,T., Simmons,J., Choi,D.W., Yenton,R.D., Oates,R. and Main,D.
Penton,R.D., Oates,R. and Main,D.
Development of a genetically and physically anchored EST resource for barley genomics: Morex unstressed seedling root cDNA library Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                         Hordeum vulgare subsp. vulgare
Hordeum vulgare subsp. vulgare
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF259495 759 bp mRNA linear EST 22-OCT-2001 HVSMEf0019H19f Hordeum vulgare seedling root EST library HVcDNA0007 (Etiolated and unstressed) Hordeum vulgare subsp. vulgare cDNA clone HVSMEf0019H19f, mRNA sequence.
                                              Email: rwing@clemson.edu
Total hg bases = 388
Seq primer: AATTAACCCTCACTAAAGGG
High quality sequence stop: 758.
                                                                                                                                                                                  Contact: Wing RA
Clemson University Genomics Institute
                                                                                                                                                                                                                       On Nov 16, 2000 this sequence version replaced gi:11188608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BF259495.2 GI:13120022
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                                                                                                                  emson University
00 Jordan Hall, Clemson,
11: 864 656 7288
LX: 864 656 4293
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTACCTCAACGACGCCGCCCATGGTCCCCGTCCGCGTCCACACCGTCCTCATCTCCAC 696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CÓGCAAGAACGECACCTGCGCTGGCTCAGGCCCGACGGCAAGACCCAGGTCACCGTTGA 636
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
1. .759
/organism="Hordeum vulgare subsp. vulgare"
                                                                                                                                                      SC 29634, USA
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Matches 284; Conserv
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                                                                                                CTGAACACGATGTTGAACACCGTGGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAGGAC
                                                                                                                                                                                                                 CACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGGCC
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ACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCCATC
                                                                                                                                                                                                                                                                                                                                                                                     CACAAGATCGACTTCCGCGAGGGCCCGGCGCTC---CCCGTCCTGGACGCCCTCCTCGAG
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                                                                                                                                                                 CTCAACTACCACGAGCGCCTCATGAAGCTCGTCAAGGTCGGCGGCCTCCTCGGCTACGAC
                                                                                                                                                                                                                                                                         GACGAGGCCAACCACGGCACCTTCGACTTCGTCTTCGTGGACGCCGACAAGGACAACTAC
                                                     --- AACACCCTCTGGAACGGCTCCGTCGTGCTCCCCGCCGACGCCCCCATGCGCAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone lib="Nordeum vulgare seedling root EST library
/clone lib="Hordeum vulgare seedling root EST library
/rote="Vector: lambdaZAP; Site 1: EcoR1; Site 2: Xho1;
/note="Vector: lambdaZAP; Site 1: EcoR1; Site 2: Xho1;
/seeds were surface sterilized then germinated under axenic
conditions in the dark at room temperature on filter paper
with water, nystatin and cefotaxime in covered
crystallization dishes. Pive-day old seedling roots were
then harvested, total RNA was prepared, poly(A) RNA was
purified, one primary unamplified CDNA library was made,
and 1 million pfu were in vivo excised to give pBluescript
SK(-) cDNA phagemids. These steps were performed in the TJ
Close laboratory at the University of California,
Riverside (Choi, Close, Fenton). Phagemids were plated and
picked at the Clemson University Genomics Institute (CUGI)
(Begum, Palmer, Frisch, Atkins and Wing). Plasmid DNA
preparations, DNA sequencing and sequence analysis were
performed at CUGI (Wing, Yu, Frisch, Henry, Simmons,
Oates, Rambo, Main). The sequence has been trimmed to
remove vector sequence analysis see
http://www.genome.clemson.edu/orders Also
see Close TJ, Wing R, Kleinhofs A, Wise R (2001)
Genetically and physically anchored EST resources for
barley genomics. Barley Genetics Newsletter 31:29-30.
(http://wheat.pw.usda.gov/ggpages/bgn/31/cover.html)"
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/db_xref="taxon:112509"
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REPERENCE
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                                                                                                                                                                                                              270;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (2000)
Contact: Olin Anderson
US Department of Agriculture, Agriculture Research
West Area, Western Regional Research Center
800 Buchanan Street, Albany, CA 94710, USA
Tel: 5105595773
Fax: 5105595818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BF484304 562 bp mRNA linear BST WHE2321_F12_K23ZS Wheat pre-anthesis spike cDNA library aestivum cDNA clone WHE2321_F12_K23, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae; Triticum.

1 (bases 1 to 562)

Anderson, O.D., Chao, S., Choi, D.W., Close, T.J., Fenton, R.D., Han, P.S., Hsia, C.C., Kang, Y., Lazo, G.R., Miller, R., Rausch, C.J., Seaton, C.L. and Tong, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 quality sequence with phred score
Seq primer: Stratagene SK primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: oandersn@pw.usda.gov
Sequence have been trimmed to remove vector sequence and low
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The structure and function of the expressed portion of the wheat genomes - Pre-anthesis spike cDNA library
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Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BF484304.1 GI:11567605
BF484304.1 GI:11567605
                                            CCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCCC 301
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                                                                                                                                                         TCCGCCAGCTGCACCCCGCCCTGCAGACCGGCCAGCGAGGAGCTGAAGAGCCTGTTCAACA 241
  CCGGCTACTCCCTGCTCGCCACCGCCCTCGCCATCCCCGACGACGACCATCTTGGCCA
                                                                                                        TCCTCAACATGCTGCTCAAGCTCATCGGCGCCAAGAAGACCATGGAGATCGGCGTCTACA
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                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                   /cultivar="Chinese Spring"
/db_xref="Chinese Spring"
/db_xref="Chinese Spring"
/clone="WHE2321 F12 K23"
/tissue_type="Spike before anthesis"
/tissue_type="Spike before anthesis"
/dev_stage="Adult plant"
/lab_host="B. coli SOLR"
/clone lib="Wheat pre-anthesis spike cDNA library"
/clone lib="Wheat pre-anthesis spike cDNA library"
/note="Vector: Lambda Uni-ZAP XR, excised phagemid;
/note="Vector: Lambda Uni-ZAP XR, excised phagemid;
/note="Vector: Lambda Uni-ZAP XR, excised phagemid;
/site_1: EcoRI; Site_2: XhoI; Plants were grown in the
greenhouse. Whole spike with awns trimmed, white, green
and yellow anther were collected and total RNA, and
poly(A) RNA were prepared, a cDNA library was made, and
the cDNA clones were in vivo excised to give pBluescript
phagemids in the TJ Close lab (Choi, Close, Fenton) at
the University of California, Riverside. Plasmid DNA
preparations and DNA sequencing were performed in the OD
Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Triticum aestivum"
                                                                                                                                                                                                                                 50.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             type="mRNA"
                                                                                                                                                                                                            0
                                                                                                                                                                                                         Score 75.6; DB 10;
Pred. No. 4.3;
D; Mismatches 254;
                                                                                                                                                                                                         Indels 12;
                                                                                                                                                                                                                                                            Length
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Triticum
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CB870888.1
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                                                                                                                                                                                                                                                                                                                           Email: stein@ipk-gatersleben.de
Insert Length: 649 Std Error:
Plate: 15 row: J column: 4
                                                                                                                                                                                                                                                                                                                                                                                                                        Molecular Markers Group, Department Genbank
Institute of Plant Genetics and Crop Plant Research (IPK)
Corrensstr. 3, 06466, Gatersleben, Germany
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Graner,A.

Barley ESTs from coleoptile tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hordeum vulgare
                                                                                                                                                                                                                                                                                                          Seq primer: To
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Stein Nils
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hordeum vulgare
                                                                                                                                                                                                                                                                                                                                                                                      Fax: 039482-5595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Varshney,R.K., Zhang,H., Burton,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCAGCGCGTCGAGATCTGCCAGCTCCCCGTCGGCGACGGCATCACCCTCTGCCGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGG 481
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAGG 601
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/clone lib="CH"
/note="Vector: pSPORT; Site_1: SalI (5-end of cDNA);
/note="Vector: pSPORT; Site_1: SalI (5-end of cDNA);
Site_2: NotI (3-end of cDNA); Due to the cloning systused_blue/white selection for recombinants is not 100 reliable. Average insert size is 1.3 kb."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               649 bp mRNA linear EST CH Hordeum vulgare cDNA clone HC15J04 5-PRIME,
                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                 /dev_stage="coleoptile, 3 days old"
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                                                                                                                                                           clone="HC15J04"
                                                                                                                                                                           db_xref="taxon:4513"
                                                                                                                                                                                                db xref="GABI:549289"
                                                                                                                                                                                                                                                 organism="Hordeum vulgare"
                                                                                                                                                                                                                                                                          . 649
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ORIGIN
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579
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304 GACAAGATCGAGGAGGAGGAGCAGAACAAGTGCCAGCAGGAGGCCGAGGCCGAGGCCG 363
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124 GAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAAGACCAGCGAGGGCTGCAAGCAGATCATC 183
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                                                                                                                                                                                                                                                                              CTCAACTACCACGAGCGCCTCATGAAGCTCGTCAAGGTCGGCGGCCTCCTCGGCTACGAC
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 GTCGAGATCTGCCAGCTCCCCGTCGGCGACGGCATCACCCTCTGCCGCCGCGCCCA 633
                                       gececegecagarececagesececes
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Search completed: May 28, 2004, 11:33:43 Job time : 5789.73 secs

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Minimum
Maximum
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 1.0
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Copyright (c) 1993 - 2004 Compugen Ltd.
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## ALIGNMENTS

REFERENCE AUTHORS SOURCE ORGANISM ACCESSION VERSION KEYWORDS RESULT 1 CC821047/c LOCUS DEFINITION TITLE MEDLINE JOURNAL Contact: Rohwer F
Biology Dept.
San Diego State University
5500 Campanile Dr, San Diego
Tel: 6195941336 646 bp DNA linear GSS 22-OCT-200 FECP4B6 Uncultured human fecal virus uncultured human fecal virus genomic, genomic survey sequence. Viruses; environmental samples.

1 (bases 1 to 646)

Breitbart,M., Hewson,I., Felts,B., Mahaffy,J.M., Nulton,J.,
Salamon,P. and Rohwer,F.
Metagenomic analyses of an uncultured viral community from human J. Bacteriol. 185 22887472 uncultured human fecal virus 14526037 feces CC821047.1 GI:37806847 619595676 forest@sunstroke.sdsu.edu (20), San Diego, 6220-6223 Ç 92102, USA (2003) GSS 22-OCT-2003

Regult No.

Score

Query Match Length DB

ID

Description

29.8 29.8 29.6 29.6

49.7

646 686 505 1151

29 14 28 13

CC821047 CA180823 BH786628 BQ619287

CC821047 FECP4B6 U CA180823 SCACST316 BH786628 fzmb014f0 BQ619287 RNOSEQ5H1 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIBS

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REFERENCE
AUTHORS
TITLE
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Matches 40; Conserv
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Best Local Similarity
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SCACST3160C06.g ST3 Saccharum of 5', mRNA sequence.
CA180823
CA180823.1 GI:35114987
BST.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Arruda P
Centro de Biologia Molecular e Engenharia Genetica
Universidade Estadual de Campinas
Caixa Postal 6010, 13083-970, Campinas SP, Brazil
Tel: 55 19 3788 1137
Fax: 55 19 3788 1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.bcccenter.fcav.unesp.br
Plate: 160 row: C column: 06
Seq primer: T7 Promoter Primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bmail: parruda@unicamp.br
Clone distribution: clone distribution information can be found
through the Brazilian Clone Collection Center (BCCC) at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 686)
Vettore,A.L., da Silva,F.R., Kemper,B.L. and Arruda,P. The libraries that made SUCEST
Genet. Mol. Biol. 24 (1-4), 1-7 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Saccharum officinarum
Rukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Saccharum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Saccharum officinarum
GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG 57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                   /clone lib="ST3"
/note="Organ: Fourth apical stalk internodes of adult
/note="Torgan: Fourth apical stalk internodes of adult
plants; Vector: pSportl; Site 1: Sall; Site 2: Notl; An
unidirectional cDNA library generated from [Fourth apical
stalk internodes of adult plants]. cDNA was prepared from
polyA+ mRNA using SuperScript Plasmid System Kit
(Invitrogen). The double-strand cDNAs were fractionated
in a sepharose CL-2B 40cm-columns and fragments sizing
between 0.8 and 1.5 Kb were directionally cloned into the
vector. Details of each source of RNA and library
construction can be obtained at
http://sucest.lad.ic.unicamp.br/public"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="uncultured human fecal virus"
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/clone_lib="Uncultured human fecal virus"
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/clone="SCACST3160C06"
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|mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
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Pred. No. 9.1e+02;
                                                     Score 29.8; DB 14;
Pred. No. 9.3e+02;
D; Mismatches 17;
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n officinarum
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BQ619287
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Zea mays
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Zea mays
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BQ619287.1
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4041 Forest Park Ave,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Bedell JA
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     Contact: Mark Fredrickser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ass: shotgun
                                                                                                                                                                                                                                                                                                                                                                                                                                                  49.3%; llarity 68.3%; Conservative
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70 GCCCTCCTCCCGAGCCACGAGGAGCTCTTCTGCGGCGTCGACGACGCCTTCTTGACGGCC
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1151 bp mRNA linear EST 06-SEP-2002 RNOSEQ5H12 SK.abl Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ5H12 SK.abl similar to (AF287276) chlorophyll a/b-binding protein precursor [Hordeum vulgare], mRNA sequence.
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1 (bases 1 to 505)

Budiman, M.A., Freese, R.G., Bedell, J.A., Nunberg, A.N. and Lakey, N.D. GeneThresher methylation filtered genomic sequences from maize
1 (bases 1 to 1151)
Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
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                                                                                                                                                                                                                                               Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.
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Location/Qualifiers
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/clone_lib="fzmb filtered library"
/clone_lib="fzmb filtered library"
/clone_lib="fzmb filtered library"
/note="Organ: leaf; Vector: pBCSK(-); Site_1: HincII; DNA
/no
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Pred. No. 9.7e+02;
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 523
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Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
Department of Plant Biology
University of Illinois
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Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Zea.
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1201 W. Gregory Dr., Urbana,
Tel: 2172655473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RNOSEQ6A01 SK.ab1 Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ6A01 SK.ab1 similar to (AF287276) chlorophyll a/b-binding protein precursor [Hordeum vulgare], mRNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Department of Plant Biology
 GGCAGGACATCAAGAACCCCGTCAGCGTCAACCAGGACCCCATCTTCAAGAGC
                                GCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                      bohnertlab@life.uiuc.edu.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bohnertlab@life.uiuc.edu.
Location/Qualifiers
                                                                                                                                                /db_xref="taxon:4577"
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/dev_stage="2 weeks old"
/clone_lib="Salt stressed Zea mays roots cDNA library"
/note="Vector: pBluescript SK+; Stressed 24 hours at 1:
mM NaC1"
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/clone_lib="Salt stressed Zea mays roots cDNA library"
/note="Vector: pBluescript SK+; Stressed 24 hours at 19
                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
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mol_type="mRNA"

cultivar="B73"
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71.7%;
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Pred. No. 1.
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1.7e+03;
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                                                                                 7e+03;
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          Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
Department of Plant Biology
University of Illinois
1201 W. Gregory Dr., Urbana, IL 6180:
Tel: 2172655473
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1 (bases 1 to 1151)
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Department of Plant Biology
University of Illinois
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Genomics of plant stress tolerance
Unpublished (2002)
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Tel: 2172655473
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bohnertlab@life.uiuc.edu.
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Location/Qualifiers
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Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
Department of Plant Biology
University of Illinois
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1151 bp mRNA linear EST 06-SEP-2002 RNOSEQ7H05 SK.abl Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ7H05 SK.abl similar to (AF287276) chlorophyll a/b-binding protein precursor [Hordeum vulgare], mRNA sequence.
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/clone_lib="Salt stressed Zea mays roots cDNA library"
/note="Vector: pBluescript SK+; Stressed 24 hours at 150
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Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
         Contact: Arruda P
Centro de Biologia Molecular e Engenharia Genetica
Universidade Estadual de Campinas
Caixa Postal 6010, 13083-970, Campinas SP, Brazil
Tel: 55 19 3788 1137
Fax: 55 19 3788 1089
Email: parruda@unicamp.br
Clone distribution: clone distribution information can be through the Brazilian Clone Collection Center (BCCC) at http://www.bcccenter.fcav.unesp.br
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Department of Plant Biology
University of Illinois
1201 W. Gregory Dr., Urbana, IL 61801, USA
                                                                                                                                                                                                            Vettore, A.L., da Silva, F.R., Kemper, B. The libraries that made SUCEST Genet. Mol. Biol. 24 (1-4), 1-7 (2001)
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Pred. No. 1.7e+03;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 40; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    509 GACATCTTCGCGGAACGGGAAGGCCCCCTTCCGGGACTACCTGGGCGGGATCCGCAAGCC 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hahn,M.G., Ojanen-Reuhs,T., Samac,D., Town,C.D., Van Aken,S., Utterback,T., Cho,J. and Fraser,C.M.

RSTs from roots of Medicago truncatula treated with oligogalacturonides of DP 6-20 Unpublished (2001)
                                                                                                                                                                                                                                              G390995e TIGR sequence name: MTMBZ09TK More information available at: www.medicago.org
Seq primer: SKmod (CTA gAA CTA gtg gAT CC).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Medicago truncatula (barrel medic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG647389.1 GI:13782501
EST.
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ESTEO9008 HOGA Medicago truncatula cDNA clone pHOGA-16B18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: T7 Promoter Primer
                                                                                                                                                                                                                                                                                                                                                                                                                      University of Georgia
220 Riverbend Road, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
rosids; eurosids I; Fabales; Fabaceae; Papilionoideae; Trifolieae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Complex Carbohydrate Research Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Michael G. Hahn
                                                                                                                                                                                                                                                                                                                                                 Smail: hahn@ccrc.uga.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Medicago
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                                                                                                                                                                                                                                                                                                                                                                         706-542-4412
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone lib="AMI"
/clone lib="AMI"
/note="Organ: Apical meristem and tissues surrounding of
/note="Organ: Apical meristem and tissues surrounding of
mature plants; Vector: pSportl; Site_1: Sall; Site_2:
NotI; An unidirectional cDNA library generated from
(Apical meristem and tissues surrounding of mature
plants]. cDNA was prepared from polyA+ mRNA using
SuperScript Plasmid System Kit (Invitrogen). The
double-strand cDNAs were fractionated in a sepharose
CL-2B 40cm-columns and fragments sizing between 0.8 and
1.5 Kb were directionally cloned into the vector. Details
of each source of RNA and library construction can be
obtained at http://sucest.lad.ic.unicamp.br/public"
/db_xref="taxon:3880"
/clone="pHOGA-16B18"
/tissue_type="3 day old seedling roots"
/dev_stage="24 hours after treatment in the dark at with 0.5 mg/ml oligogalacturonides (DP 6-20) in the presence of 100 ug/ml Gentamicin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/db_xref="taxon:4547"
/clone="SCCCAM1004D03"
                                                                                                                                                                        /organism="Medicago truncatula"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
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                                                                                                                                                      cultivar="A17"
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Pred. No. 1.9e+03;
D; Mismatches 19
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-16B18 5' end,
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BG549181
LOCUS
DBFINITION
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Matches
                                                                       Matches
                                                                                       Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
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Best Local Similarity
                                                                                    Local
282
                                     7
                                                                        38;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              855 California Ave,
Tel: 650 723 2227
Fax: 650 725 8221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea mays
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EST.
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947073D08.yl
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stanford University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Department of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BG549181
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plate: 947073 row: D column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Walbot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zea mayв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maize ESTs from various cDNA libraries sequenced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Walbot, V
                                                                                       Similarity
                    CGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACGTCCGCCAAGACCCAAACGAGTCCTTGCCAGAATACCTCGTCTGATTCAACAACGCC
CGGCAGGACATCAAGAACCCCGGCAGCGTCAACCAGGACCCCCATCTTCAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          walbot@stanford.edu
                                                                                                                                                              /clone lib="947 - 2 week shoot from Barkan lab"
/note="Organ: shoot; Vector: Lambda ZAP (pBlueScript SK-);
Site 1: EcoRI; Site 2: XhoI; Directionally cloned using
Stratagene's UniZap XR cDNA cloning kit with the 5' end
at the EcoRI site. The library represents 8 x 10e5
independent recombinant phage. The plants were greenhouse
grown."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /clone_lib="HOGA"
/note="Vector: pBluescript SK-; Site_1: BcoRI; Site_2:
/note="Vector: pBluescript SK-; Site_1: BcoRI; Site_2:
XhoI; cDNA was prepared from polyA+ enriched RNA. The cDNA
was directionally ligated into the Unizap XR vector from
Stratagene and packaged using Gigapack III Gold packaging
extracts. Plasmids containing cDNA inserts were excised
from the recombinant lambda-Zap phage using Ex-assist
helper phage and propagated in SOLR cells."
                                                                                                                                                                                                                                                                                                                                              /organism="Zea mays"
/mol_type="mRNA"
/cultivar="B73"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                        /tissue_type="leaf and stem, including leaf base"
/dev_stage="2 week old seedling (3 leaves)"
/lab_host="XL1-Blue"
                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:13557825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  525 bp mR
947 - 2 week shoot from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      47.7%;
                                                                                      47.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Palo Alto, CA 94304, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                       Score 28.4; DB 12;
Pred. No. 2e+03;
0; Mismatches 16;
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Pred. No. 1.9e+03;
0; Mismatches 19;
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                                                                        Gaps
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RESULT 13

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CG250176
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                               254 GACTICCGCCGCGACCICGAGGACCICGTCTGCGACCACCICGGCGGCTGCTTC 307
                                                                                                                                                                                 genomic survey E
CG250176
CG250176.1 GI:3
GSS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bmail: parruda@unicamp.br
Clone distribution: clone distribution information can be found
through the Brazilian Clone Collection Center (BCCC) at
http://www.bcccenter.fcav.unesp.br
plate: 128 row: C column: 11
Seq primer: T7 Promoter Primer.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Centro de Biologia Molecular e Engenharia Genetic
Universidade Estadual de Campinas
Caixa Postal 6010, 13083-970, Campinas SP, Brazil
Tel: 55 19 3788 1137
Pax: 55 19 3788 1089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saccharum officinarum
Saccharum officinarum
Saccharum officinarum
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
Clade; Panicoideae; Andropogoneae; Saccharum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 544)
Vettore, A.L., da Silva, F.R., Kemper, B.L. and Arruda, P. The libraries that made SUCEST
Genet. Mol. Biol. 24 (1-4), 1-7 (2001)
                                                                                                                                                                                                                                                                       CG250176 577
OGVCW47TV ZM_0.7_1.5_KB Zea
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SCEPSB1128C11.g SB1 Saccharum
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.

1 (bases 1 to 577)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T., Resnick, A., Fraser, C.M., Budiman, M.A., Bedell, J.A., Rohlfing, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Arruda P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CA210513
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                                                                                                                                                           Zea mays
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                                                                                                                                       mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone lib="SB1"
/note="Organ: Stalk Bark from adult plants; Vector:
/note="Organ: Stalk Bark from adult plants; Vector:
pSportl; Site 1: SalI; Site 2: NotI; An unidirectional
cDNA library generated from [Stalk Bark from adult
plants]. cDNA was prepared from polyA+ mRNA using
SuperScript Plasmid System Kit (Invitrogen). The
double-strand cDNAs were fractionated in a sepharose
CL-28 40cm-columns and fragments sizing between 0.8 and
1.5 Kb were directionally cloned into the vector. Details
of each source of RNA and library construction can be
obtained at http://sucest.lad.ic.unicamp.br/public"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="taxon:4547"
/clone="SCEPSB1128C11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Saccharum officinarum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   host="DH108"
                                                                                                                                                                                                                                                   sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 28.4; DB 14;
Pred. No. 2e+03;
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TITLE
JOURNAL
COMMENT
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AUTHORS
TITLE
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ORGANISM
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BG517389
LOCUS
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Best Local Similarity

Matches 38; Conserv
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Zea mays
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9712 Medical Center Drive, Tel: 301-838-5843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unpublished (2002)
Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea
                                                                                                                                                                                                                                                  Email: walbot@stanford.edu
Plate: 947061 row: G colum
Location/Qualifiers
                                                                                                                                                                                                                                                                                                       Tel: 650 723 2227 Pax: 650 725 8221
                                                                                                                                                                                                                                                                                                                                        Stanford University
855 California Ave, Palo Alto, CA 94304,
                                                                                                                                                                                                                                                                                                                                                                                           Contact: Walbot
                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                  University
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                                                                                                                                                                                                                                                                                                                                                                             Department of Biological Sciences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: 301-838-0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACCTACGTGGACCGCCTTCTTC
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/clone lib="947 - 2 week shoot from Barkan lab"
/note="Organ: shoot; Vector: Lambda ZAP (pBlueScript SK-);
Site 1: EcoRI; Site 2: XhoI; Directionally cloned using
Stratagene's UniZap XR cDNA cloning kit with the 5' end
at the EcoRI site. The library represents 8 x 10e5
independent recombinant phage. The plants were greenhouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="ZMMBMa0507H21"
/clone_lib="ZM_0.7_1.5_KB"
/note="Vector: pBCSK-; Site_1: HincII; 0.7-1.5
methylation filtered genomic DNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Zea mays"
/mol_type="genomic DNA"
/strain="B73"
/db_xref="taxon:4577"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .577
                                                                                                         /tissue_type="leaf and stem, inc
/dev_stage="2 week old seedling
/lab_host="XL1-Blue"
                                                                                                                                                                             /mol_type="mRNA"
/cultivar="B73"
                                                                                                                                                                                                                                     1. .580
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Pred. No. 2e+03;
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Ś ORIGIN Search completed: May 28, 2004, 11:33:37 Job time : 237.634 secs Query Match 47.3%; Score 28.4; DB 12; Length 580; Best Local Similarity 70.4%; Pred. No. 2e+03; Matches 38; Conservative 0; Mismatches 16; Indels 0; Gaps 7 CGCCAGGGCCCCAÁGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60 grown." 0.

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
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seq length: 2000000000
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Match
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(without alignments)
5129.286 Million cell updates/sec
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60
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     Issued patents NA:*

1: /cgn2_6/ptcdata/2/ina/5A_COMB.seq:*

2: /cgn2_6/ptcdata/2/ina/5B_COMB.seq:*

3: /cgn2_6/ptcdata/2/ina/6A_COMB.seq:*

4: /cgn2_6/ptcdata/2/ina/6B_COMB.seq:*

5: /cgn2_6/ptcdata/2/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptcdata/2/ina/backfiles1.seq:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
     GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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                                                         US-09-475-515-20
US-09-475-515-9
US-09-475-515-7
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US-09-475-515-73
US-09-184-418C-73
US-09-184-418C-10
US-09-184-418C-10
US-09-184-418C-11
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Sequence 20, Appli sequence 4, Appli sequence 7, Appli sequence 79, Appli sequence 79, Appli sequence 75, Appli sequence 76, Appli sequence 76, Appli sequence 74, Appli sequence 2, Appli sequence 2, Appli sequence 5, Appli sequence 73, Appli sequence 6, Appli sequence 73, Appli sequence 100, Appli sequence 100, Appli sequence 110, Appli sequence 11, Appli sequence 800, Appri s
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                                                                                                                                                                                                                                                                                                                                                                 Matches
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>. 6602705
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Result

## **ALIGNMENTS**

US/09475515A

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APPLICANT: BARNETT, SUSAN
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: LLAU, Ying
APPLICANT: HARYOG, Karin
APPLICANT: HARYOG, Karin
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
ITILE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCB: 1621.002
CURRENT FILING DATE: 1999-12-30
CURRENT PILING DATE: 1999-12-30
INUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 20
FIRE INFORMATION: Description of Artificial Sequence: synthetic p55
OTHER INFORMATION: Gag Major Homology Region
US-09-475-515-20
; Sequence 9, Application US/09475515A; Patent No. 6602705; GENERAL INFORMATION:
; APPLICANT: BARNETT, Susan; APPLICANT: ZUR MEGEDE, Jan; APPLICANT: SRIVASTAVA, Indresh; APPLICANT: LIAN, Ying; APPLICANT: HARTOG, Karin; APPLICANT: LIU, Hong
                                                                                                                                                                                                       RESULT 2
US-09-475-515-9
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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Similarity 93.3%;
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                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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LENGTH: 1268
; TYPE: DNA
; ORGANISM: Artificial Sequence
; PRATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: common region
US-09-475-515-9
              ; Sequence 5, Application US/09475515A ; Patent No. 6602705 ; GENERAL INFORMATION:
                                                                      RESULT 4
US-09-475-515-5
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Best Local Similarity
                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: GREER, Christopher
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
TITLE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT PILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES FILE REFERENCE: 1621.002 CURRENT APPLICATION NUMBER: US/09/475,515A CURRENT FILING DATE: 1999-12-30 NUMBER OF SEQ ID NOS: 90 SOFTWARE: Patentin Ver. 2.0
APPLICANT: BARNETT, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: GREER, Catherine APPLICANT: SELBY, Mark APPLICANT: WALKER, Christopher
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                                                                                                                                                                                                                                                                                                                                                       LENGTH: 1515
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Description OTHER INFORMATION: HIV-Gag
                                                                                                                                                                                                                                                                                                                                                                                                                                       ID NO 4
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93.3%;
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Pred. No. 7
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.8e-09;
                                                                                                                                                                                                                                                                Length 1515;
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                                                                                                                                                        921
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US-09-475-515-78
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                                                                                                                                               OTHER INFORMATION: Description of Artificial Sequence: GP1 US-09-475-515-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO S
                                                                         Matches
                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                          SEQ ID NO 78
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Best Local Similarity
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APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/475,515A CURRENT FILING DATE: 1999-12-30 NUMBER OF SEQ ID NOS: 90 SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                    APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REPERENCE: 1621.002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
                                                                                                                                                                               LENGTH: 1865
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: HARTOG, Karin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH: 1853
868 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      862 GACATICGGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGC
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                                   1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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                                                                         Conservative
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                                                                                      89.3%;
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                                                                       Score 53.6; DB 4;
Pred. No. 8.1e-09;
0; Mismatches 4;
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RESULT 6 US-09-475-515-79

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FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 7
LENGTH: 2031
TYPE: DNA
ORGANISM: Artificial Sequence
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; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GP2
US-09-475-515-79
                                                                                                                                                                           ; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic; OTHER INFORMATION: HIV-Gag/HCV-core fusion polypeptide
US-09-475-515-7
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Patent No. 6602705
GENERAL INFORMATION:
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Best Local Similarity
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CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SBQ ID NO 79
                                                                                      Matches
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APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
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APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OP INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OP INVENTION: OF VIRUS-LIKE PARTICLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: BARNETT, Susan
APPLICANT: ZÜR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPPLICANT: BARNETT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 1865
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   862
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   GACATICCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 927
                                         GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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                                                                                        Conservative
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                                                                                                          89.3%;
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                                                                                                        Score 53.6; DB 4; Pred. No. 8.1e-09;
                                                                                        Mismatches
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                                                                                                                              Length 2031;
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; SBQ ID NO 75
; LENGTH: 4472
; TYPE: DNA
; ORGANISM: Artificial Sequence
; PEATURE:
    OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: gp160.modUS4.delV1/V2.gag.modSF2
US-09-475-515-75
                                                                                                                                                                                                                                                                       APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POI
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
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Best Local Similarity 93.3%;
Query Match
Best Local Similarity
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APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
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TYPB: DNA
ORGANISM: Artificial Sequence
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o. 6602705
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 89.3%;
93.3%;
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Pred. No. 8.8e-09;
 Score 53.6; DB 4;
Pred. No. 8.8e-09;
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                        Length 4472;
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OTHER INFORMATION: gp160.modSF162.delV2.gag.modSF2
US-09-475-515-76
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Best Local Similarity
                                                                                                 SEQ ID NO 74
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                                                                                                                                   APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
                                                                                                                      SOFTWARE:
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                                                                                                                                                                                                                                                                                                                     APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
                                                                                                                                                                                                                                                                                                                                                                                                                                        ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 4608
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
                                                               TYPB: DNA
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                                     DRGANISM: Artificial Sequence
                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ent No. 6602
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3930 GACATCCGCCAGGGCCCCAAGGAGCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74, Application US/09475515A
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                                                                             4689
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                                                                                                                   PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                            BARNETT, Susan
ZUR MEGEDB, Jan
SRIVASTAVA, Indresh
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SRIVASTAVA, Indresh
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93.3%;
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Pred. No. 8.
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; OTHER INFORMATION: Description of Artificial Sequence:gagpol-SYNgp - ; OTHER INFORMATION: optimised gagpol sequence US-09-552-950-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-475-515-73
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Matches
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                                                                                                     SOPTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 4307
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                                                                                                                                                                                                                                                                                  Sequence 2, Application US/09552950 Patent No. 6541248
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 90
SOFTWARE: PatentIn Ver. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
                                                                                                                                                                                                                                 APPLICANT: Oxford Biomedica (UK) Limited TITLE OF INVENTION: Anti-Viral Vectors
                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/552,950 CURRENT FILING DATE: 2000-04-20
                                                                                                                                                                                                                 FILE REFERENCE: 674524-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                           NUMBER OF SEQ ID NOS: 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence FEATURE:
                                                    ORGANISM: Artificial Sequence PRATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: gp160.modUS4.gag.modSF2
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TYPE: DNA
                                                                                        TYPE: DNA
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LIU, Hong
Catherine
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Pred. No. 8
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Mismatches 4
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Query Match

Score 43;

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4

Length 4307

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Sequence 5, Application US/09552950

Patent No. 6541248

GENERAL INFORMATION:
APPLICANT: Oxford Biomedica (UK) Limited
TITLE OP INVENTION: Anti-Viral Vectors
FILE REFERENCE: 674524-2004
CURRENT APPLICATION NUMBER: US/09/552,950
CURRENT FILING DATE: 2000-04-20
NUMBER OF SEQ ID NOS: 22
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 5
LENGTH: 9772
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:pSYNGP
US-09-552-950-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
US-09-184-418C-73
US-09-184-418C-73
; Sequence 73, Application US/09184418C
; Patent No. 6492110
; GENERAL INFORMATION:
; APPLICANT: Habn, Beatrice
; APPLICANT: Gao, Feng
; APPLICANT: Shaw, George
; TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
; FILE REFERENCE: D6287
Search completed: May 28, 2004, 13:26:22 Job time: 7.49156 secs
                                                                                                                                                                                                                                                               ; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
; FEATURE:
; OTHER INFORMATION: isolate=96ZM651.8; gene=gag
US-09-184-418C-73
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US-09-552-950-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 71.7%; Score 43; DB 4; Length 9772; Best Local Similarity 83.1%; Pred. No. 2.7e-05; Matches 49; Conservative 0; Mismatches 10; Indels
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                                                                                                                                                                                            Watch 63.7%; Score 38.2; DB 4; Local Similarity 78.0%; Pred. No. 0.00081;
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                                                         Score
 29.6
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Match
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AUTHORS
TITLE
JOURNAL
COMMENT
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KEYWORDS
SOURCE
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ALIGNMENTS

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CA180823
SCACST3160C06.g ST3 Saccharum officinarum cDNA clone SCACST3160C06
CA180823
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EST.

Saccharum officinarum
Saccharum.

1 (bases 1 to 686)
Vettore,A.L., da Silva,F.R., Kemper,E.L. and Arruda,P.
The libraries that made SUCEST
Genet. Mol. Biol. 24 (1-4), 1-7 (2001)
Contact: Arruda P
Contact Arruda P
Contact Contact Arruda P
Contact Arr

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RESULT 2
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02-SEP-2002
                                                                                      BOUTCE
                                                                                                                                                                                                                         Submitted (03-JUL-2002) Barker G., Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Edwards D., Coghill J., Holdsworth "A BBSRC-funded wheat EST resource
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Triticeae; Triticum.
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae;
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, Coghill J., Holdsworth 1
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/mol_type="mRNA"
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/clone="SCACST3160C06"
/lab_host="DH10B"
/db xref="taxon:4565"
/mol_type="mRNA"
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70.2%;
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Last updated, Version 2)
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M., Lenton J., Shewry
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ACCESSION
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KEYWORDS
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LOCUS
DEFINITION
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1 (bases 1 to 1151)
Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
Department of Plant Biology
University of Illinois
1201 W. Gregory Dr., Urbana, IL 61801, USA
Tel: 2172655473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ619287 1151 bp mRNA linear EST 06-SEP-2002 RNOSEQ5H12_SK.abl Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ5H12_SK.abl similar to (AF287276) chlorophyll a/b-binding protein precursor [Hordeum vulgare], mRNA sequence.
                                                         BQ619288 1151 bp mRNA linear EST 06-SEP-2002 RNOSEQ6A01 SK.abl Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ6A01 SK.abl similar to (AF287276) chlorophyll
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BQ619288.1
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                                           a/b-binding protein precursor
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Location/Qualifiers
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/clone_lib="Salt stressed Zea mays roots
/note="Vector: pBluescript SK+; Stressed
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AUTHORS
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BQ619295
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BQ619295.1
BST.
Zea mays
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Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
Department of Plant Biology
University of Illinois
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Department of Plant Biology
University of Illinois
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Spermatophyta; Magnoliophyta; Liliopsida;
clade; Panicoideae; Andropogoneae; Zea.
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
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Location/Qualifiers
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Location/Qualifiers
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Pred. No. 7.1e+02;
0; Mismatches 14;
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                                                    Zea mays
Zea mays
                                                                                                                                         BQ619455

1151 bp mRNA linear EST 06-SEP-2002 RNOSEQ7H05_SK.ab1 Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ7H05_SK.ab1 similar to (AF287276) chlorophyll a/b-binding protein precursor [Hordeum vulgare], mRNA sequence.
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Wang, H. and Bohnert, H.J.
Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
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1151 bp mRNA linear EST 06-SEP-2002 RNOSEQ7A07_SK.abl Salt stressed Zea mays roots cDNA library Zea mays cDNA clone RNOSEQ7A07_SK.abl similar to (AF287276) chlorophyll a/b-binding protein precursor [Hordeum vulgare], mRNA sequence.
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Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.
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cultivar="B73"
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73.1%;
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Pred. No. 7.1e+02;
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Genomics of plant stress tolerance
Unpublished (2002)
Contact: Mark Fredricksen
Department of Plant Biology
University of Illinois
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Contact: Mark Fredricksen
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University of Illinois
1201 W. Gregory Dr., Urbana, IL 61801, USA
Tel: 2172655473
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Tel: 2172655473
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Location/Qualifiers
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Pred. No. 7.1e+02;
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  Length 1151;
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RESULT 10
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CK166030
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Matches 38; Conserv
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Matches 41; Conserv
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                                                                                                                                                                                                                                                    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae; Triticeae; Tri
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FGAS050078 Triticum aestivum
mRNA sequence.
CK166030
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BU645917 708 bp mRNA linear ES 1112034B07.x1 C. reinhardtii CC-1690 (mt+), CC-1691 (normalized), Lambda Zap II Chlamydomonas reinhardtii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bmail: fgas_ests@cs.usask.ca
This sequence is the direct result of the Base calling software.
Phred (default parameters). It is the raw base calls. To aid in the identification of the high quality insert the software Lucy (default parameters) has been run on this sequence. Lucy identified the region [62,774].
Plate: Talt707 row: H column: 16.
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University of Saskatchewan, Department of Computer Science
1C101 Engineering Building, 57 Campus Drive, Saskatoon,
Saskatchewan, S7N 5A9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
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Contact: Wm L Crosby
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                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone lib="Triticum aestivum PGAS: Talt7"
/note="Organ: Crown; Vector: pGEM-T; SSH (suppression subtractive hybridization) cDNA library from genotype CI14106 cold hardened at 2 C for 21 days and 49 days (equal amount of cDNA pooled together before subtraction, tester) and subtracted against genotype CI14106 non-hardened (20 C) (driver). Nitro-pyrole anchored oligo-dT priming and non-directional cloning."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/cultivar="Wheat line CI 14106"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:4565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Triticum aestivum"
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Pred. No. 7.1e+02;
0; Mismatches 19;
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                                              EST 30-SEP-2002 (mt-), Gamete
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ACCESSION
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CK165296
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                564 CTTCAACCGCGACCCCATCGACCGCTTCATCCTCTACTTCCACCGCTACTTCAAGGCC 621
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Durham, NC 27708-1000
Tel: 919 613 8159
Pax: 919 613 8177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40;
                                                                                                                                            mRNA sequence.
CK165296
CK165296.1 GI:38997204
EST.
                                                                                                                                                                                                                                   PGAS049245 Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                              3 CATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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                  Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.
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BST.
Chlamydomonas reinhardtii
                                                                                              Triticum aestivum
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DCMB Box 91000
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1 (bases 1 to 708)
Grossman, A., Chang, C.-W., Davies, J
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Eukaryota; Viridiplantae; Chlorophyta; Chlorophyceae; Volvocales;
                                                                                                                    Triticum aestivum (bread wheat)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gamete (normalized), Lambda Zap II*

/clone_lib="C: reinhardtii CC-1690 (mt+), CC-1691 (mt-),
Gamete (normalized), Lambda Zap II*

/note="Vector: pBluescript II SK-; Site_1: EcoRI; Site_2:
XhoI; Gamete library was constructed by Hui Zhao, Min Lu,
Jeffrey McDermott, William J. Snell and John Davies.
Strain 21gr cells (CC-1690; mating type plus) and strain
6145c cells(CC-1691; mating type minus) that had been
growing on a light-dark cycle (13:11 L/D) in R-medium
(Sager and Granick) were separately transfered into
nitrogen-free medium at 8 hours into the light period.
PolyA mRNA was purified from each sample every 2 hours for
the next 18 hours. The mRNA was pooled and used for cDNA
synthesis. The cDNA was directionally cloned into lambda
Zap II (Stratagene) in the EcoRI (5') and XhoRI (3')
sites. pBluescript II SK- plasmids were excised from the
lambda ZAP clones by superinfection with ExAssist
(Stratagene) phage. The library was normalized using
method 4 described in Bonaldo et al., (1996) Genome
Research 6: 791-806."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chauser@duke.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Chlamydomonas reinhardtii"
/mol_type="mRNA"
/strain="21gr (CC-1690 wild type mt+)
wild type mt-)"
/db_xref="taxon:3055"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ocation/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 29.2; DB 13; Pred. No. 8.1e+02;
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                                                                                                                                                                                                                                                 mRNA linear
TaLt7 Triticum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18;
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                                                                                                                                                                                                                                             EST 05-DEC-2003 aestivum cDNA,
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REFERENCE
AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      615
                                                                                              Unpublished (2003)
Other ESTs: PH1 26 D03.b1 A002
Contact: Cordonnier-Pratt MM
Laboratory for Genomics and Bioinformatics
The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
                                                                                                                                                                                                                                                                                                                                Sorghum bicolor
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Sorghum.
1 (bases 1 to 781)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PH1 26 D03.g1 A002 Phosphorous-deficient seedlings Sorghum bicolor cDNA clone PH1 26 D03 A002 5', mRNA sequence. CF430199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bioinformatics
University of Saskatchewan, Department of Computer Science
1C101 Engineering Building, 57 Campus Drive, Saskatoon,
Saskatchewan, S7N SA9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: fgas_ests@cs.usask.ca
This sequence is the direct result of the Base calling software
Phred (default parameters). It is the raw base calls. To aid in the
identification of the high quality insert the software Lucy
(default parameters) has been run on this sequence. Lucy identified
the region [123,581].
Plate: Talt705 row: A column: 03.
                                                                                                                                                                                                                                                         Cordonnier-Pratt,M.-M., Suzuki,Y., Sugano,S., Klein,R.R., Lian
Sun,P., Sullivan,R., Harris,K., Bastman,A. and Pratt,L.H.
An BST database from Sorghum: phosphorous-deficient seedlings
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CF430199.1 GI:34442900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CF430199
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Contact: Wm L Crosby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sorghum bicolor (sorghum)
                       Smail: mmpratt@uga.edu
library constructed by Dr. Yutaka Suzuki and Dr. Sumio Sugano in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCATCAAGGAGAACCGCGNCNAGACCTTCCACGACCTCGACGACTACCTCCTCAAGAAC
                                              706 542 1860
706 583 0210
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db xref="taxon:4565"
/lab host="DH5 alpha"
/clone lib="Triticum aestivum FGAS: Talt7"
/clone lib="Triticum aestivum FGAS: Talt7"
/note="Organ: Crown; Vector: pGEM-T; SSH (suppression subtractive hybridization) cDNA library from genotype CI14106 cold hardened at 2 C for 21 days and 49 days (equal amount of cDNA pooled together before subtraction, tester) and subtracted against genotype CI14106 non-hardened (20 C) (driver). Nitro-pyrole anchored oligo-dT priming and non-directional cloning."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Triticum aestivum"
/mol_type="mRNA"
/cultivar="Wheat line CI 14106"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
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66.7%;
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Pred. No. 8.6e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
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Best Local
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02-SBP-2002
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1-455
                                                                                                                                                                                                                                                                                                                                                                       Wilson I., Beswick R., Shepherd S., Barker G., Parker J., Ow
Bdwards D., Coghill J., Holdsworth M., Lenton J., Shewry P.,
"A BBSRC-funded wheat BST resource for the academic community
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Triticum aestivum (mercia) clone Al0_d37_plate_1 embryo (micropylar tip)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL811116;
                                                                                                    Submitted (03-JUL-2002) Barker G., Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Triticum aestivum (bread wheat)
                                                                United Kingdom
                                                                                                                                                                                                                                                                                                                                        Unpublished.
                                                                                                                                                                                                     Barker G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           post anthesis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             are presented as their reverse exclude polyA.
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llarity 71.7%;
Conservative
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/clone="PH1 26 D03 A002"
/lab host="DH10B-TI phage-resistant E. coli"
/clone lib="Phosphorous-deficient seedlings"
/clone lib="Phosphorous-deficient seedlings"
/clone lib="Phosphorous-deficient seedlings"
/note="Vector: pME18S-FL3; Site 1: Xho1; Site 2: Xho1; The
/note="Vector: pME18S-FL3; Site 1: Xho1; Site 2: Xho1; The
/note="Vector: pME18S-FL3; Site 1: Xho1; Site 2: Xho1; The
/note="Vector: pME18S-FL3; Site 1: Xho1 seedlings
grown hydroponically in the absence of added phosphorous.
At 14 days of age, roots and shoots were harvested and
stored at -80 C until RNA was isolated. Double-stranded
cDNA was cloned unidirectionally into different DraIII
sites of the pME18S-FL3 vector (5-prime DraIII site is
cacrogroup. XhoI excises
  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the cDNA insert."
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/mol_type="mRNA"
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Last updated, Version
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; Pred. No. 9.3e
0; Mismatches
                                                                                                 EMBL/GenBank/DDBJ databases.

Crop Research, Long Ashton, Bristol BS41 9AF
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P., Edwards K.;
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SOURCE
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VERSION
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Best Local (
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JOURNAL
                                                                  Matches
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                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        324 GTCATCAAGGAGACCGCCGCCNAGACCTTCCACGACCTCGACGACTACCTCCTCAAGAAC 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                  40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished. Contact: Takuji Sasaki
Contact: Takuji Sasaki
National Institute of Agrobiological Resources
National Institute of Program, Kannondai 2-1-2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 491)
Sasaki, T. and Yamamoto, K.
Rice cDNA from immature leaf including apical meristem
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AU031268 Rice cDNA from immature leaf including apical meristem Oryza sativa (japonica cultivar-group) cDNA clone E61244_2Z, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AU031268.1 GI:3767158
                                                                                                                                                                                                                                                                                                                                                                                                            Fax: 81-298-38-7468
                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: 81-298-38-7441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                      GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
GTCATCAAGGAGACCGCCGACAAGACCTTCCACGACNTCGACGACTACCTCCTCAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                           .: tsasaki@abr.affrc.go.jp,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B₽;
                                                                                                                                                                                                                                                                                                                                                                            =' RGP'
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/db xref="taxon:4565"
/mol_type="mRNA"
/organism="Triticum aestivum"
/cultivar="mercia"
                                                                                                                                                 /note="Organ: leaf; immature leaf including apical
meristem (under long day condition)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95 A; 140 C; 149 G; 70 T; 1 other;
                                                                                                                                                                                    meristem"
                                                                                                                                                                                                   /organism="Oryza sativa (japonica cultivar-group)"
/mol_type="mRNA"
/cultivar="Nipponbare"
/db_xref="taxon:39947"
/clone="E61244_2Z"
/dev_stage="immature"
/clone_lib="Rice cDNA from immature leaf including apical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev stage="10 days post anthesis"
/tissue type="embryo (micropylar tip)"
/clone_lib="d:37"
/clone="A10_d37_plate_1"
                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                           .491
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66.7%;
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Pred. No. 1e+03;
D; Mismatches 20; Indels
                                                                  Score 28.6; DB 9;
Pred. No. 1.1e+03;
0; Mismatches 20
                                                                                                                                                                                                                                                                                                                                                                                           URL:http://rgp.dna.affrc.go.jp/
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                                                                  <u>.</u>.
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RESULT 15

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LOCUS
DEFINITION
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JOURNAL
COMMENT
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VERSION
KEYWORDS
SOURCE
ORGANISM
Search completed: May 28, 2004, 11:33:34 Job time: 239.634 secs
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AUTHORS
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                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PEATURES
                                                                                                                                                                Query Match
Best Local Similarity
Matches 40; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                   295 GTCATCAAGGAGACCGCCGAAGACCTTCCACGACCTNGAGGACTACCTCCTCAAGAAC 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Triticum aestivum (bread wheat)

Triticum aestivum

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Pooideae; Triticeae; Triticum.

1 (bases 1 to 513)

Tingey, S. V., Powell, W., Wolters, P., Dolan, M., Hainey, C., Yuan, Z.,

Miao, G., Caraher, N. and Hanafey, M.K.

DuPont Wheat cDNA Sequence

Unpublished (2002)

Contact: Scott V. Tingey

Contact: Scott V. Tingey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              wdk2c.pk007.j12 wdk2c Triticum aestivum cDNA clone wdk2c.pk007.j12 cCA707887
                                                                                                                   1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B. I. DuPont de Nemours and Company
1 Innovation Way, P.O. Box 6104, Newark, DE 19714-6104, USA
Tel: 302-631-2602
Fax: 302-631-2607
Email: Scott.V.Tingey@USA.dupont.com
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CA707887.1 GI:25429680
BST.
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B. I. DuPont
                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                 /organism="Triticum aestivum"
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/db_xref="taxon:4565"
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/tissue_type="kernel"
/clone_lib="wdk2c"
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/note="Vector: pBluescript SK+; Site_1: EcoRI; Site_2:
/note="Vector: pBluescript SK+; Site_1: EcoRI; Site_2:
XhoI; Wheat {Triticum aestivum L.} developing kernel, 7
days after anthesis."
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                              47.7%; Score 28.6; DB 14; 66.7%; Pred. No. 1.1e+03; ative 0; Mismatches 20;
                                                                                                                                                                   Indels
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                                                                                                                                                                   0;
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
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Perfect score:
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1504.2
1489.8
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seq length: 2000000000
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Match
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(without alignments)
9876.679 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      / cgn2_6/ptodata/1/pubpna/PCT NEW PUB.seq:*
/ cgn2_6/ptodata/1/pubpna/PCT NEW PUB.seq:*
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/ cgn2_6/ptodata/1/pubpna/US07_NEW_PUB.seq:*
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Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*/cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
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   US-09-899-575-4
US-09-967-464-68
US-09-967-464-68
US-09-899-575-21
US-09-899-575-51
US-09-899-575-99
US-09-899-575-3
US-10-190-435-18
US-10-190-435-14
US-10-190-435-35
US-10-190-435-35
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                                                                                                                                                                                                                                                                                                      Description
Sequence 4, Appli
Sequence 64, Appl
Sequence 68, Appl
Sequence 21, Appl
Sequence 51, Appl
Sequence 63, Appl
Sequence 3, Appli
Sequence 18, Appl
Sequence 16, Appl
Sequence 19, Appl
Sequence 19, Appl
Sequence 11, Appl
Sequence 14, Appl
Sequence 35, Appl
Sequence 34, Appl
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US-09-899-575-4

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3.0	70.5	79.5	79.5	79.5	79.5	79.5	79.5	79.6	79.6	79.6	79.6	79.6	83.6	84.2	84.2	84.2	84.3	84.3	84.3	84.3	84.4	84.4	٠		٠	٠	٠	٠	84.5	•	-
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t	7	15	15	15	15	15	15	13	13	13	13	13	13	15	15	10	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
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	15	15,	e 17,	17,	e 11,	18,	<b>₩</b>	73,	74,	76,	75,	4,	e 20,	81,	57,	67,	e 82,	88	83	59	12	12	11	10	9	15	20	13	17	38	w
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## ALIGNMENTS

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APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan
APPLICANT: Egnelbrecht, Susan
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 4
LENGTH: 1509
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                                                                                                                                                                                                                                                                                     US-09-899-575-4
                                                                                                                                                                           Query Match 100.0%; Score 1509; Best Local Similarity 100.0%; Pred. No. 0; Matches 1509; Conservative 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 4, Application US/09899575 Publication No. US20030223961A1
                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag
OTHER INFORMATION: of HIV strain AF110967
61 CTGCGCCCCGGCGGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCCAGCCGCGAG
                                                                                                         1 ATGGGCGCCCGCGCCAGCATCCTGCGCGCGGCGAGAAGCTTGGACAAGTGGGAGAAGATCCGC 60
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APPLICANT: Barnett, Jeffrey
APPLICANT: Singh, Mamohan
APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
APPLICANT: Ulmer, Jeffrey
APPLICANT: Ulmer, Jeffrey
APPLICANT: Dubensky, Jr., Thomas W.
TITLB OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS
FILE REFERENCE: PP16269.004
CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR FILING DATE: 2001-09-29
PRIOR FILING DATE: 2001-09-29
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 68
SOPTWARE: Patentin version 3:1
SEQ ID NO 64
LENGTH: 1509
TYPE: DNA
ORGANISM: Human immunodeficiency virus type 1
US-09-967-464-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 2
US-09-967-464-64
; Sequence 64, Application US/09967464
; Publication No. US20030138453A1
; GENERAL INFORMATION:
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APPLICANT: Otten, Gillis
APPLICANT: Donnelly, John J
APPLICANT: Polo, John M.
APPLICANT: Barnett, Susan
APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
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Best Local Similarity 99.9%;
Matches 1508; Conservative
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                                                                                                     ATGGGCGCCCGCGCGAGCATCCTGCGCGGGGGAGAAGCTGGACAAGTGGGGAGAAGATCCGC
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ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACGAGGAGCTGCGCAGCCTGTACAAC
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; LENGTH: 1509
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type
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APPLICANT: O'Hagan, Gillis
APPLICANT: O'Hagan, Gillis
APPLICANT: Donnelly, John J.
APPLICANT: Polo, John M.
APPLICANT: Barnett, Susan
APPLICANT: Ulmer, Jeffrey
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FILE REFERENCE: PP16269.004
CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR FILING DATE: 2000-09-28
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 68
SOFTWARE: Patentin version 3.1
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Publication No. US20030138453A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                           Query Match 99.7%;
Best Local Similarity 99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 68
                                                                                                                                                                                                                                                                                                                                 Matches 1497; Conservative
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APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan
APPLICANT: Egnelbrecht, Susan
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYNEDTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 21
LENGTH: 1509
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag;
OTHER INFORMATION: coding sequence of HIV strain AF110967
US-09-899-575-21
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Best Local Sim
Matches 1497;
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Publication No. US20030223961A1
GENERAL INFORMATION:
APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
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WS-09-899-575-51

(Sequence 51, Application US/09899575)

(Sequence 51, Application US/09899575)

(Sequence 51, Application US20030223961A1)

(GENERAL INFORMATION:

APPLICANT: Zur Megede, Jan

APPLICANT: Barnett, Susan W.

APPLICANT: Barnett, Susan W.

APPLICANT: Barnett, Susan W.

APPLICANT: Barnett, Susan W.

APPLICANT: Parnett, Susan W.

APPLICANT: Van Rensburg, Estrelita Janse

TITLE OF INVENTION: POLYMPTIDES ENCODING ANTIGENIC HIV TYPE C

TITLE OF INVENTION: POLYMPTIDES, POLYPEPTIDES AND USES THEREOF

FILE REFERENCE: PP01631.102

CURRENT APPLICATION NUMBER: US/09/899,575

CURRENT APPLICATION NUMBER: US/09/899,575

CURRENT FILING DATE: 2001-07-05

PRIOR APPLICATION NUMBER: 09/475,704

PRIOR FILING DATE: 1999-12-30

NUMBER OF SEQ ID NOS: 135

SOPTWARE: Patentin Ver. 2.0

SEQ ID NO 51

LENGTH: 1494

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence: HIV Type C

OTHER INFORMATION: Gag optimized
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Best Local Similarity 92.7%;
Matches 1402; Conservative
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; Sequence 99, Application US/09899575; Publication No. US20030223961A1; GENERAL INFORMATION:
; APPLICANT: Zur Megede, Jan; APPLICANT: Barnett, Susan W.; APPLICANT: Egnelbrecht, Susan; APPLICANT: van Rensburg, Estrelita Ja; TITLE OF INVENTION: POLYNUCLEOTIDES ET
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FILE REFERENCE: POLYPEPTIDES, POLYPEPTIDES AND FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR PILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 99
LENGTH: 1491
CTGCGCCCCGGCGGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCCAGCCGCGAG
                                                                       ATGGGCGCCCGCGCCAGCATCCTGCGCGCGGCAAGCTGGAACAAGTGGGAGAAGATCCGC
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Sequence 63, Application US/09967464; Publication No. US20030138453A1; GENERAL INFORMATION:

APPLICANT: O'Hagan, Derek
APPLICANT: Otten, Gillis
APPLICANT: Donnelly, John J.
APPLICANT: Barnett, Susan
APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
APPLICANT: Dubensky, Jr., Thomas W.
TITLE OF INVENTION: MICROPARTICLES FOR DELIV
FILE REFERENCE: PP16269.004
CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR APPLICATION NUMBER: 60/315,905
PRIOR FILING DATE: 2001-08-30
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; SOFTWARE: PatentIn version 3
; SEQ ID NO 63
; LENGTH: 1479
; TYPE: DNA
; ORGANISM: Human immunodefic US-09-967-464-63
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Sequence 3, Application US/09899575

; Sequence 3, Application No. US20030223961A1

; Publication No. US20030223961A1

; APPLICANT: Zur Megede, Jan
APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Barnett, Susan W.
APPLICANT: Wan Renaburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYNEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PPOLS31.102
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 3
LENGTH: 1479
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag
OTHER INFORMATION: of HIV strain AF110965
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Oy  181 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACCGAGGAGCCTGCACAAC 240	61 67 121 127	-435-16  atch  B4.5%; Score 1275.2; DB 15; Length 3462; cal Similarity 92.5%; Pred. No. 2.6e-265; 1398; Conservative 0; Mismatches 78; Indels 36; Gaps 1 ATGGGCGCCGGCGCAGCATCCTGCGCGGCGAGAAGCTGGACAAGTGGGAAGAAGATCCGC	SOFTWARE: PATENTIN V SEQ ID NO 16 LENGTH: 3462 TYPE: DNA ORGANISM: Artificia PEATURE: OTHER INFORMATION:	; APPLICANT: ENGELBRECHT, Susan ; APPLICANT: ENGELBRECHT, Susan ; APPLICANT: VAN RENSBURG, BStrelita J. ; TITLE OF INVENTION: POLYNUCLBOTIDES ENCODING ANTIGENIC HIV TYPE C ; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF ; FILE REPERENCE: PP18133.003 / 2302-18133 ; CURRENT APPLICATION NUMBER: US/10/190,435 ; CURRENT PILING DATE: 2002-12-30 ; NUMBER OF SEQ ID NOS: 319	8 - 8 <del>4</del> 9		Oy  1318 OGCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCACCGCCCACCGCCCAAGCAGC	AAGGACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGC
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1258 AAGACTGCACCGAGCCCAGCCCAGCTTCCTGGGCAAGATCTTGCCGGCCCAGCCACAAGGGCCAAGTTTCCTGGGCCAAGATCTTGCCAGCCCAGCCACAGGGCCACAGGGCCAACTTTCCTGGGCAAGATCTTGCCCCAGCCCACCGGCCCAAGGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAACGGCCCAAGCCCCCC	38 AAGGGCCCCCGGCGCAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCAAGGAGGCCCCCCGGCAACGCACGC	018 CTGGAGGAGATGATGACCGCCTGCCAGGGCCTGGGCGGCCCCGGCCACAAGGCCCCGCGTG	898 ACCTRECEGECGAGEAGCCACCCAGGACGTGAAGAACTGGAAGACCTGGAAGACCTGCATGACCAGACCTGCTG	78 AAGCCGTTGATCCTTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGA	658 GTGGCCCCGGCCAGATGCCCCGACCCCCGCGGCAGCAACATCGCCGGCGCCACCAGCACC 717	538 GACCIGAACACGATGITIGAACACCGIGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG 507 [	18 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGAAGGTGAAGGTGATCCAAGGAAGAAG	307 CTGGACAAGATCGAGGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC 366 361 GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG 417

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RESULT 11
US-10-190-435-19
; Sequence 19, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDB, Jan
APPLICANT: BARNETT, Susan W.
APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Bstrelita J.
; APPLICANT: VAN RENSBURG, Bstrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
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Best Local (
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TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence: GagRTmutTatRevNef_C
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Sequence 14, Application US/10190305A

Publication No. US20030198621A1

GENERAL INFORMATION:
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, Susan
APPLICANT: LIAN, Ying
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV
TITLE OF INVENTION: TYPE C POLYPEPTIDES, POLYPEPTIDES AND
PILE REFERENCE: 2302-18702 / 18702.002
PILE REPERENCE: 2302-18702 / 18702.002
CURRENT APPLICATION NUMBER: US/10/190,305A
CURRENT FILING DATE: 2002-07-05
NUMBER OF SEQ ID NOS: 93
SOPTWARE: Patentin Ver. 2.0
SEQ ID NO 14
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Best Local Similarity
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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Pred. No. 2.5e-265;
0; Mismatches 78;
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RESULT 13

US-10-190-435-35

; Sequence 35, Application US/10190435

; Publication No. US20030143248A1

; GENERAL INFORMATION:

; APPLICANT: ZUR MEGEDE, Jan

; APPLICANT: LIAN, Ying

; APPLICANT: ENGELBRECHT, Susan W.

; APPLICANT: ENGELBRECHT, Susan

; APPLICANT: VAN RENSBURG, Estrelita J.

; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C

; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

; FILE REFERENCE: PP18133.003 / 2302-18133

; CURRENT APPLICATION NUMBER: US/10/190,435
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Best Local Similarity
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TYPE: DNA
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: gpl60mod.TV1.dV1V2-gagmod.BW965
3-10-190-435-35
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SOFTWARE: PatentIn Ver. 2
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RESULT 14
US-10-190-435-34
US-10-190-435-34
Sequence 34, Application US/10190435
Publication No. US20030143248A1
GENERAL INFORMATION:
APPLICANT: BARNETT, SUBAN W.
APPLICANT: BARNETT, SUBAN W.
APPLICANT: LIAN, Ying
APPLICANT: VAN RENSBURG, BETTELITA J.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133
CURRENT APPLICATION NUMBER: US/10/190,435
CURRENT FILLING DATE: 2002-12-30
NUMBER OF SEQ ID NOS: 319
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 34
LENGTH: 4606
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: Gp160mod.TV1.dV1-gagmod.BW965

658 GTGGCCCCCGGCCAGATGCCCGACCCCCGCGGCACATCGCCGGCGCACCACCAGCACCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAC	478 GCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGCGACCCCCCAG 537	68 ACCGTGGCCACCCTGTACTGCGTGCACGAAACAAGTCCAGGAGAAGAACCAAGGAGAAGAACCAAGGAGAACAAGTACCAAGGAGAAGAACCAAGGAGAAGAACCAAGGAGAAGAA	121 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCAGGACCGCCGAGGGCTGCAAGCAGATC 180	Query Match  84.5%; Score 1275.2; DB 15; Length 4606;  Best Local Similarity 92.5%; Pred. No. 2.5e-265;  Best Local Similarity 92.5%; Pred. No. 2.5e-265;  Matches 1398; Conservative 0; Mismatches 78; Indels 36; Gaps 4;  1 ATGGGGCCCGGCCAGCATCCTGCGCGAGAAGCTTGGACAAGTGGGAGAAGATCCGC 60
ROF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND US: REFERENCE: PP18133.003 / 2302-18133 RENT APPLICATION NUMBER: US/10/190,435 RENT FILING DATE: 2002-12-30 RENT POPULATION: Description of Artificial Sequence RENTURE: 1NFORMATION: Description of Artificial Sequence RENTURE: 1NFORMATION: 9p160mod.TV1.dV2-gagmod.BW965 RENT INFORMATION: Description of Artificial Sequence RENTURE: 2004 RENT INFORMATION: Description of Artificial Sequence RENTURE: 2	RESULT 15  US-10-190-435-36  ; Sequence 36, Application US/10190435 ; Publication No. US2003014324BA1 ; GENERAL INFORMATION: ; APPLICANT: ZUR MEGEDE, Jan ; APPLICANT: ZUR MEGEDE, Jan ; APPLICANT: BIRNETT, SUBAN W. ; APPLICANT: ENGELBRECHT, SUBAN ; APPLICANT: WAN RENSBURG, Estrelita J. ; TITLE OF INVENTION: POLYNUCLEGIDES ENCODING ANTIGENIC HIV TYPE C	Oy  1378 CCCCCGGCGAGAGCCTTCCGCTTCGAGGAGACCACCCCCCAAGCAGGAGCCCAAG	Oy  1198 AACTGCCGCCCCCCCCAAGAAGGCTGCTGAAGTGCGCAAGAGGCCACCAGATG	

1138 AAGGGCCCCCGGCGAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGC	1078 CTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGATGCAGAAGAGCAACTTC	1018 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCGGCCACAAGGG	958 GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCGC	898 ACCCTGCGCGCCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGAC	838 CTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTT [	778 AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATT	718 CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCGTGCCCGTGGGCGACATCTA	658 GTGGCCCCGGCCAGATGCGCGGCGACCCCCGCGGCAGCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAC	598 GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTGCAGGCCGG	538 GACCTGAACACGATGTTGAACACCGTGGGCGGCCAGGCCAGGCCGCCATGCAGA:	478 GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCCC	418 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG	361 GCCGACGGCAAGGTGAGCCCAGAACTACCCCCATCGTGCAGAACCTGCAGGG 	301 CTGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCCAGCAGGAGAGACACAGGGAGAAGA	241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCCA	181 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCAGCGAGGAGCTGCGCAGCCTGTACAA	121 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCA
MAGGAGGGCCACATCGCCAAG 1197	ATGATGCAGAAGAGCAACTTC 1137                      ATGATGCAGAAGAGCAACTTC 4273	CCCGGCCACAAGGCCCGCGTG 1077	GCTCTCGGCCCCGGCGCCACC 1017	TGGATGACCGAGACCCTGCTG 957	TACGTGGACCGCTTCTTCAAG 897	ATGTACAGCCCCGTGAGCATC 837	GTGCCCGTGGGCGACATCTAC 777	ATCGCCGGCGCCACCAGCACC 717	CACCCGTGCAGGCCGGCCCC 657	GCCGCCATGCAGATGCTGAAG 597	AGCGAGGGCGCCACCCCCAG 537	GTGAAGGTGATCGAGGAGAAG 477 	CAGAACCTGCAGGGCCAGATG 417	AAGACCCAGCAGGCCAAGGAG 360                     AAGATCCAGCAGGCCGAGGCC 3496	GTCCGCGACACCAAGGAGGCC 300	HARGETGEGEAGECTGTACAAC 240        	SCCGAGGGCTGCAAGCAGATC 180 

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Search completed: June 1, 2004, 14:25:19
Job time: 703 secs

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## ALIGNMENTS

## 31-DEC-1998; 01-SEP-1999; 30-DEC-1999; 06-JUL-2000 WO200039304-A2 Synthetic. Human immunodeficiency virus; type C strain AF110967 HIV synthetic Gag polynucleotide. 31-OCT-2000 AAA51610; AAA51610 standard; DNA; 1509 expression cassette; antigenic; type C; HIV; Env; synthetic; immunization; packaging cell line; antigen presentation; ss. (first entry) 98US-0114495P. 99US-0152195P. 99WO-US031273. PP.

Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially human against HIV.

WPI; 2000-452401/39.

Barnett

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(CHIR ) CHIRON CORP.

Claim 2; Page 93; 113pp; English

Expression cassettes comprising a polynucleotide encoding antigenic type C human immunodeficiency virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytotoxic T-lymphocyte (CTL) responses by DNA immunization. Gag of HIV-1 self-assemble into non-infectious virus-like particles which are used as a matrix for the proper presentation of an antigen entrapped or associated to the immune system of the host of

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HIV; ds; vaccine; gene; immune response; microparticle; adsorbent surface; poly(alpha-hydroxy acid); polyhydroxy butyric polycaprolactone; polyorthoester; polycyanoacrylate; detergent; submicron emulsion; viral infection; bacterial infection; parasitic infection; HIV-1 p55gag polypeptide.
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Query Match 100.0%;
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Matches 1509; Conservative 0
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                                                           polymucleotide sequence SEQ ID
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polynucleotides encoding antigenic I applications including DNA immunization lines, particularly in gene therapy.
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                                                                                                                                                                                                                                                                                                                                                      Sequence 1509 BP;
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                                                                                                                                                                                                                                                                                                                      The present invention describes expression cassettes comprising a polynucleotide sequence encoding a polypeptide comprising immunogenic HIV type C polypeptides. The expression cassettes comprise any of the HIV type C sequences encoding Gag, Pol, Vif, Vpr, Tat, Rev, Vpu, Env or Nef (I). (I) have immunostimulant activity and can be used in gene therapy. The HIV type C polynucleotides are useful in applications including DNA immunisation, generation of packaging cell lines, and production of HIV Type C proteins. The polynucleotides are particularly useful in gene therapy and DNA immunisation applications. ABL39942 to ABL40054 and ABB06215 represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New polynucleotides encoding antigenic HIV Type C polypeptides, useful in applications including DNA immunization or generation of packaging cell lines, particularly in gene therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; Fig 6; 233pp; English.
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  ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGAGGCC
                                                                                         CTGGAGGGCTTCGCCCTGAACCCCCGGCCTGCTGGAGAACCGCCGAGGGGCTGCAAGCAGATC
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                                                                                                                                                                                                                                 98.8%; ilarity 99.3%; Conservative
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                                                                                                                                                      Expression cassettes comprising a polymucleotide encoding antigenic type C human immunodeficiency virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytotoxic T-lymphocyte (CTL) responses by DNA immunization. Gag of HIV-1 self-lymphocyte into non-infectious virus-like particles which are used as a assemble into non-infectious virus-like particles which are used as a
                                                                                                                                                                                                                                                                   Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV polypeptide and the polypeptide useful for immunizing a mammal especia human against HIV.
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01-SEP-1999;
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                                                                                                             Sequence 1509 BP;
                                                                                                                                  matrix for the proper presentation of an antigen entrapped or associated to the immune system of the host
                                                                                                                                                                                                                                                Disclosure; Page 104; 113pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                           06-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200039304-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human immunodeficiency virus; type C strain AF110967.
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99US-0152195P.
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                                                                              98.7%;
99.2%;
                                                                 Score 1489.8; DB 3;
pred. No. 8.6e-175;
0; Mismatches 12;
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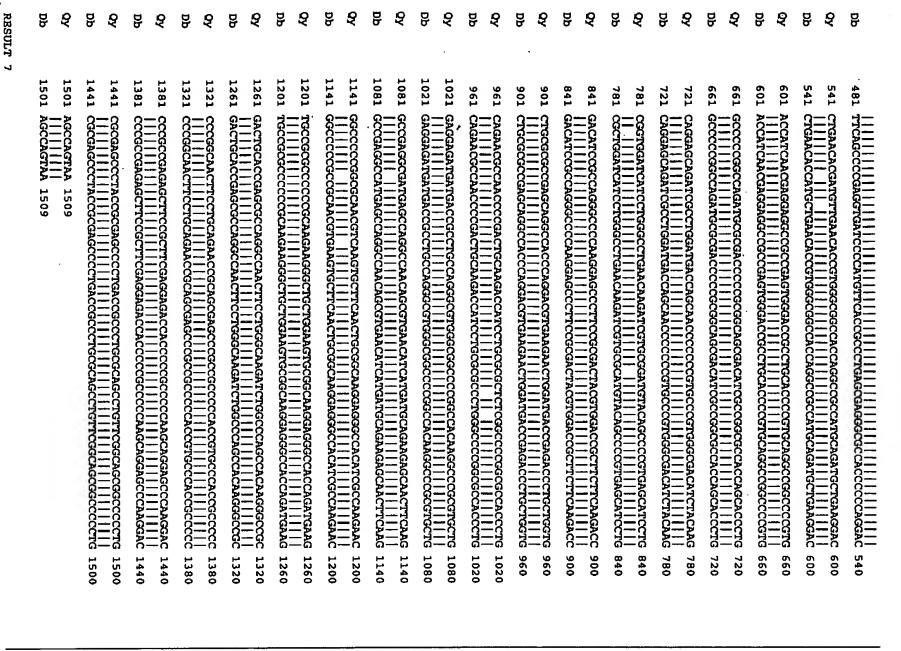
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The invention relates to a method of raising an immune response in a host animal. The method of the invention comprises administering a microparticle that has an adsorbent surface to which a first biologically active macromolecule (e.g. a nucleic acid) has been adsorbed. The microparticle comprises a polymer microparticle of poly(alpha-hydroxy acid), a polyhydroxy butyric acid, a polycaprolactone, a polyorthoester, a polycyanoacrylate, a detergent, and submicron emulsion. The method/microparticle of the invention is useful for immunising a host animal against viral, bacterial or parasitic infections. The present DNA sequence encodes a HIV-1 p55gag polypeptide. (Updated on 29-AUG-2003 to standardise OS field)
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Ulmer J,
                                                                                                                                                                                                                                                                               A microparticle to which a biologically active macromolecule is adsorbed for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a
                                                                                                                                                                                                                                  Claim 72; Fig 6; 100pp; English.
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Query Match Best Local S Matches 1497 Local Similarity 1497; Conservative 98.7**%**; 99.2**%**; Score 1489.8; Pred. No. 8.6e-0; Mismatches 0, 6e-175; 12; DВ 6; Indels Length 1509 0; Gaps 0

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                                                   The present invention describes expression cassettes comprising a polynucleotide sequence encoding a polypeptide comprising immunogenic HIV type C polypeptides. The expression cassettes comprise any of the HIV type C sequences encoding Gag, Pol, Vif, Vpr, Tat, Rev, Vpu, Env or Nef (I). (I) have immunostimulant activity and can be used in gene therapy. The HIV type C polynucleotides are useful in applications including DNA immunisation, generation of packaging cell lines, and production of HIV Type C proteins. The polynucleotides are particularly useful in gene therapy and DNA immunisation applications. ABL39942 to ABL40054 and ABB06204 to ABB06215 represent sequences used in the exemplification of the present invention
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                                                                                                       GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG
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AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC
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92.5%;
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AAL44548 standard; DNA; 1479

AAL44548;

29-AUG-2003 08-NOV-2002 (revised)
(first entry)

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HIV-1 p55gag polypeptide coding sequence

RESULT 10
AAL44548
ID AAL44
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AC AAL44
AC AAL44 HIV; ds; vaccine; gene; immune response; microparticle; adsorbent surface; poly(alpha-hydroxy acid); polyhydroxy butyric polycaprolactone; polyorthoester; polycyanoacrylate; detergent; submicron emulsion; viral infection; bacterial infection; parasitic infection; HIV-1 p55gag polypeptide.

immunodeficiency virus

WO200226209-A2

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Best Local Similarity 92.5%;
Matches 1399; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O'hagan D, Otten G,
Ulmer J, Dubensky TW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1479 BP; 325 A; 529 C; 463 G; 162 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A microparticle to which a biologically active macromolecule is adsorbed, for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-519084/55
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30-AUG-2001;
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 GCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCAGGCCTTCAGCCCCCGAGGGCGAGGGTGATCCCCATGTTCACCGCCCTTGAGCGAGGGCGCCACCCCCCAGGCCTTCAGCCCAGGGCGCGAGGGCGACCCCCCCAG
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2001US-0315905P.
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RESULT 11
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ABL39953 standard;

DNA; 1479

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C 1497	CGGCGAGCCCCTGACCGCCCTGCGCAGCCTGTTCGGCAGCGGCCC	00	. ह
G 14	CCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGGCCAGAAGCAGGAGAG	1360	뫉
14	CCCCCGGCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGCCCCCAAGCAGGAGCACCAAG	1378	Ş
C 1359	CCCGAGCCCACCGC	1318	D <b>b</b>
C 1377	CGCCCCGGCAACTTCCTGCAGAAACCGCAGCGAGCCGCCGCCGCCCCCACCGTGCCCACCGCC	1318	Ş
C 13	3CCCAGCCACAAGGG	1258	<b>8</b>
C 13	ACTGCACCGAGCCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACCAAGGG	N	8
12	AACTGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGAT	1198	ర్జ
12	AACTGCCGCCCCCCCCCCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCCACCAGATG	1198	Ś
h	AAGGGCCCCCGGCGATCGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCCGC	1138	рb
ດ	AAGGGCCCCCGGCGAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGGCCACATCGCCAAG	1138	ð
c 1137	CTGGCCGAGGCGATGAGCCAGGCCAACACCAGCGTGATGATGCAGAAGAGCAACTT	1081	밁
_U	CTGGCCGAGGCGATGAGCCAAGGCCAACAGCGTGAACATCATGATGCAGAAGAGAGCAACTT	1078	δ.
Q-	CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGCCCCAGGCCACAAGGCCCGCGTG	1021	8
10	CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCCGGCCACAAGGCCCGGCT	1018	Ş
C 1020	GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCGGCGCCAG	961	B
C 1017	TGCAGAACGC	958	S
G 960	ACCCTGCGCCGAGCAGAGCCCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTG		밁
G 957	ACCCTGCGCGCGAGGAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCTGCTV	898	Ş
G 900	CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG	841	B
G 897	CTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAC	838	8
C 840	AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC	781	D <b>b</b>
C 837	AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC	778	S
Ć 780	CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCATCCCCGTGGGCGACATCTA	721	뭥
C 777	CTGCAGGAGCAGATCGCCTGGATGACCCAGCAACCCCCCGTGCCCGTGGGCGACATCTAC	718	Ś
C 720	ξ.	661	B
7	GTGGCCCCCGGCCAGATGCGCGACACCCCCCCGCGACAACCACCAGCAACCAGCAACCACC	658	S
C 660	GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCC	10	밁
C 657	GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGGTGCAGGCCGGCC	98	ફ
G 600	GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAC	541	당
G 597	GACCTGAACACGATGTTGAACACCGTGGGCCGCCACCAGGCCGCCATGCAGATGCTGAAG	538	Ş

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human immunodeficiency virus type C; antigenic HIV type C protein; immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; vpu; env; nef; immunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                Sequence 1479 BP; 325 A; 529 C; 463 G; 162
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(UYST-)
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                                             ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGAGGCC 300
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                                                                                                                                                                                                                                                                                                          Score 1276.8; DB 6; Length 1479; Pred. No. 1.2e-148; 0; Mismatches 77; Indels 36;
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                                                                                                            Query Match
Best Local Similarity
Matches 1398; Conserv
                                                                                                                                                                                                                The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Env. Int, Nef, pl5RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy or used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intrarectally, orally or intravenously. The expression cassette is useful for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an HIV Type C related sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New expression cassette comprising a polynucleotide sequence encopolypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
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(UYST-)
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31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
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UNIV STBLLENBOSCH
                                                            ATGGGCGCCCGCGCCAGCATCCTGCGCGCGGCGAGAAGCTGGAACAAGTGGGAGAAGATCCGC
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The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy cused in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally,
                                                                                                                                                                                      05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
                                                                  Disclosure; Fig 13; 301pp;
                                                                                   New expression cassette comprising a polypeptide including an HIV Gag, Env, Prot, or Rev polypeptide, useful for in packaging cell lines:
                                                                                                                                                                                                                          05-JUL-2002;
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                         CTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG
                                                                                             CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCGTGCCCGTGGGCGACATCTAC
                                                                                                                             AAGCGGTGGATCATCCTGGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCCGTGAGCATC
                                                                                                                                                               GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCCGTGCACGCCCCCC
                                                                                                                                                                              Conservative
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intrarectally, orally or intravenously. The expression cassette is useful for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an HIV Type C related sequence of the invention.
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3462 BP; 790 A; 1198 C; 1068 G; 406 **∺** 0 ٦; 0 Other;

84.5%; 92.5%; Score 1275.2; DB 9 Pred. No. 1.6e-148; 0; Mismatches 78; 9; Indels Length 36; Gaps

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GACCTGAACACGATGTTGAACACCGTGGGCCGCCACCAGGCCCGCCATGCAGATGCTGAAG
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16-JAN-2002; 2002US-0349728P.
16-JAN-2002; 2002US-0349793P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                      Immunogenic HIV polypeptide; human immunodeficiency virus; HIV; vaccine; gene therapy; packaging cell line; humoral immune response; cellular immune response; gene delivery vector; DNA immunisation; ds.
                                                                                                                                                   Synthetic
                                                                                           05-JUL-2002; 2002WO-US021421.
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Zur Megede J, Barnett SW. 4

2003-221602/21.

New synthetic I polypeptides, u generating humo especially huma etic polynucleotides encoding antigenic HIV type B and/or type C les, useful as immunogenic compositions or vaccines for humoral or cellular immune responses against HIV in a subject, humans.

Example 1; Fig 11; 262pp; English.

SXCCCCCCCCCCCCXSXAJAJAXXX

The invention describes a synthetic polynucleotide encoding 2 or more immunogenic HIV polypeptides, where at least 2 of the polypeptides are derived from different HIV subtypes. The polynucleotide is useful for immunisation, generation of packaging cell lines, or production of HIV polypeptides. The polynucleotide and its encoded proteins are useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, or for inducing neutralising antibodies against HIV. The gene delivery vector comprising the polynucleotide is also useful for DNA immunisation of, or for generating an immune response (e.g. a humoral or cellular immune response) in, a subject such as a mammal, particularly a human. This sequence encodes a human immunodeficiency virus immunogenic peptide

Sequence 4419 BP; 980 A; 1582 C; 1371 G; 486 T; 0 ų; 0 Other;

5 8 S 밁 ð 닭 S 뮵 S ㅁ S 망 5 뮹 5 B 5 밁 뮍 밁 ð Query Match Best Local Similarity Matches 1398; Conserva 487 478 427 418 367 307 247 241 187 127 121 361 301 181 67 61 CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCCTGCAAGCAGATC CTGCGCCCCGGCAGAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGCGAG CTGCGCCCCGGCGAGAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGCGAG ATGGGCGCCCGCGCAGCATCCTGCGCGGCGAGAAGCTGGACAAGTGGGAGAAGATCCGC GCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCAG GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG GCCGAC---GGCAAGGTGAGCCAGAACTACCCCCATCGTGCAGAACCTGCAGGGCCAGATG ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACACCAAGGAGGCC GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG CTGGACAAGATCGAGGAGGAGGAGAACAAGTCCCAGCAGAAGACCCAGCAGGCCAAGGAG ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCCAAGGAGGCC ATGAAGCAGCTGCAGCCCGCCCTGCAGAACCGGCACCGAGGAGCTGCGCGCAGCCTGTACAAC GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG CTGGACAAGATCGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC ATCCGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCAGGAGCTGAAGAGCCTGTTCAAC 84.5%; nilarity 92.5%; Conservative ; Score 1275.2; pred. No. 1.5e 0; Mismatches ore 1275.2; DB 7; ed. No. 1.5e-148; Mismatches 78; Indels Length 4419; 36; Gape 477 417 366 360 300 246 186 180 126 120 657 606 597 546 537 486 426 306 240 66

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                         construct GagRTmutTatRevNef_C SEQ ID NO
 cassette; HIV Gag; Env; Int; Nef; pl5RnaseH; Pol; Tat; Prot;
                                                         (first entry)
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New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
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                                                                                                                                                                                                                                    05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                  Disclosure; Fig 16; 301pp; English.
                                                                                                                                                                                           Zur Megede J,
                                                                                                                                                                                                                                                                     05-JUL-2002; 2002WO-US021420
                                                                                                                                                                                                                                                                                                                        Human immunodeficiency
                                                                                                                                                                                                                                                                                                                                        Rev; HIV type
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The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Int, Nef, pl5RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy o used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intravectally, orally or intravenously. The expression cassette is us for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an H Type C related sequence of the invention.

မ္ပ Env.

Sequence 4419 BP; 980 A; 1582 C; 1371 G; 486 T; 0 U; 0 Other;

Length

4419

5 Query Match 84.9 Best Local Similarity 92.9 Matches 1398; Conservative 84.5%; 92.5%; Score 1275.2; DB 9; Length Pred. No. 1.5e-148; O; Mismatches 78; Indels 36; Gaps 60

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CTTCCTGCAGAACCGCAGCGAGCCCG 	318 CGCCCCGGCAJ
S = S	258 AAGGACTGCACC
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GCCGAGCAGGCACCCAGGACGTGAAGAACTGGATGACCGAGACCCTGCTG 957	98 ACCCTGCGCGCCGA  \
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6=6 	718 CTGCAGGAGCAGAT             727 CTGCAGGAGCAGAT
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TCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTGCAGGCCGGCC	8 GACACCATCAACC
CACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG 597	38 GACCIGAA         47 GACCIGAA
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Search completed: June 1, 2004, 11:31:51 Job time: 621 secs

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Listing first 45 summaries
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score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

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## ALIGNMENTS

JOURNAL	TITLE	AUTHORS	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	Locus	AX455888	RESULT 1	
<pre>polypeptides and uses thereof Patent: WO 0204493-A 4 17-JAN-2002;</pre>	Polynucleotides encoding antigenic hiv type c polypeptides,	zur Megede, J., Barnett, S.W., Engelbrecht, S. and van Rensburg, B.		artificial sequences.	synthetic construct	synthetic construct	•	AX455888.1 GI:21714881	AX455888	Sequence 4 from Patent WO0204493.	AX455888 1509 bp DNA lin			
	polypeptides,	ıd van Rensburg, B.									linear PAT 06-JUL-2002			

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/mol_type="unassigned DNA"
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Human immunodeficiency virus 1
Viruses; Retroid viruses; Retroviridae; Lentivirus;
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Sequence 68 from Patent
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  ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTACAAC
                                            CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATC
                                                                                                           CTGCGCCCCGGCGGCAAGAAGAACACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGCGAG
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/mol_type="unassigned DNA"
/db_xref="taxon:11676"
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                                                CTGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCAGCAGGCCAAGGAG
                                                                                             ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTGCGCGACACCAAGGAGGCC
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GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATGGTG
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="synthetic Gag coding sequence of HIV strain AF110967"
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Polymucleotides encoding antigenic hiv type c polypeptides,
polypeptides and uses thereof
Patent: WO 0204493-A 99 17-JAN-2002;
CHIRON CORPORATION (US); University of Stellenbosch (ZA)
Location/Qualifiers
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   CAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCATCCCCGTGGGCGACATCTACAAG
             CAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGCCCGTGGGCGACATCTACAAG
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/mol_type="unassigned DNA"
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/note="Gag_TV2_C_ZAopt"
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1 (bases 1 to 1485)

Gao,F., Li,Y., Decker,J.M., Peyerl,F.W., Bibollet-Ruche,F., Rodenburg,C.M., Chen,Y., Shaw,D.R., Allen,S., Musonda,R., Shaw,G.M., Zajac,A.J., Letvin,N. and Hahn,B.H.

Codon usage optimization of HIV type 1 subtype C gag, pol, enef genes: in vitro expression and immune responses in DNA-vaccinated mice

DNA-vaccinated mice

AIDS Res. Hum. Retroviruses 19 (9), 817-823 (2003)
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Gao,F., Li,Y., Decker,J.M., Bibollet-Ruche,F.,
Chen,Y., Shaw,D.R., Allen,S., Musonda,R., Shaw,
Hahn,B.H.
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Submitted (16-NOV-2002) Medicine, |
112 RPIII, LaSalle Street, Durham,
Location/Qualifiers
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AAGGCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGGCGCCCACCCCC 534
                                                          ATGGTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAG
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CGKEGHIARNCRAPRKKGCWKCGKEGHQMKDCTERQANFLGKIWPSHKGRPGNFLQNR
PEPTAPPAESFRFEETTPAPKQESKDREALTSLKSLFGSDPLSQ"
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note="codon """
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92.6%;
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, NC 27710, USA
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,G.M., Zajac, A.J.
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r 8 387 - AX455887 - 1479 bp DNA linear PAT 06-JUL-2002 TION Sequence 3 from Patent WO0204493.	1423 AAGGACCGCGAGGCCCTGACCAGCCTGAAGAGCCTGTTCGGCAGCGAC 1470 1495 CCCCTGAGCCAGTAA 1509	1375 GCCCCCCCGAGAGACTTCCGCTTCGAGAGACCACCCCCGGCCCCAAGCAGGAGCCC 1434	315 GGCCGCCCCGGCAACTTCCTGCAGAACCGCAGC	255	1195 AAGAACTGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAG 1254 	1135 TTCAAGGGCCCCCGGCGCAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCC 1194	1075 GTGCTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGATGCAGAAGAGCAAC 1134 	1015 ACCCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCGGCCACAAGGCCCGC 1074	955 CTGGTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCGGCGCC 1014	895 AAGACCCTGCGCGCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCTG 954	835 ATCCTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTC 894	775 TACAAGOGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGC 834	715 ACCCTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGCCCGTGGGCGACATC 774	55 61	95 AAGGACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTGCAGGCCGGC 65	535 CAGGACCTGAACACGATGTTGAACACCGTGGGCCGCCACCAGGCCGCCATGCAGATGCTG 594
\$ \$ \$ \$	Db Db	8 B 8	Qy db	Qy Db	Qy Db	Qy Db	Оу	QQ dd	Q 40	음 <i>성</i>	Z B Q	ORIGIN	FEAT	4 B	SOUI OI REFI	ACCI VERS
658 661 718	4 20 0 1	478 481 538	418 421	361 361	301 301	241 241	181 181	121 121	61		Query Match Best Local S Matches 1399	GIN	EATURES Source	TITLE Polynucleotides encoding antigenic polypeptides and uses thereof JOURNAL Patent: WO 0204493-A 3 17-JAN-2002; CHIRON CORPORATION (US) : University	_	ACCESSION A VERSION A KEYWORDS .
B GIGGCCCCGGCCAGATGCGCGACCCCCGCGGGCGACATCGCCGGCGGCGACATCGCCGGCGACATCGCCGGCGACATCGCCGGCGACATCGCCGGCACCACCAGCACCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCACCAGCAG				GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAG	CTGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCAGCAGGCCAAC 		P P									AX45 AX45

AUTHORS TITLB JOURNAL	SOURCE ORGANISM REFERENCE	DEFINITION ACCESSION VERSION KEYWORDS	RESULT 9	ОУ	Оу	Qy db	Db 99	P 49	g &	QV dd	Qy Db	QY db	QQ da	Qy dd	Qy dq	\$ <b>4</b> 0	
O'Hagan,D., Otten,G., Donnelly,J.J., Polo,J.M., Barnett,S., Singh,M., Ulmer,J. and Dubensky,T.W. Microparticles for delivery of the heterologous nucleic acids Patent: WO 0226209-A 63 04-APR-2002; CHIRON CORPORATION (US)	Human immunodeficiency virus 1 (HIV-1)  M Human immunodeficiency virus 1  Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate  lentivirus group.	AX468543.1 GI:21901373	1430 by DWA linear DWA 16-TH -20	1498 CTGAGCCAGTAA 1509            1468 CTGAGCCAGTAA 1479	1438 GACCGCGAGCCCTACCGCGAGCCCCTGACCGCCCTGCGCAGCCTGTTCGGCAGCGGCCCC 1497	1378 CCCCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGCCCCAAGCAGGAGCCCAAG 1437	1318 CGCCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCCCCCC	1258 AAGGACTGCACCGAGCGCAAGCCAACTTCCTGGGCAAGATCTGGCCCAGGCCACAAGGGC 1317	1198 AACTGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGATG 1257	1138 AAGGGCCCCCGGCGCAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCCACATCGCCAAG 1197	1078 CTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGCAGAAGAGCAACTTC 1137	1018 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCGGCCACAAGGCCCGCGTG 1077	958 GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCGC	898 ACCCTGCGCGGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCTGCTG 957	838 CTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG 897	721 CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCATCCCCGTGGGCGACATCTAC 780  778 AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGGATGTACAGCCCCCGTGAGCATC 837	
Qy Db	& B &	dd Vy	B &	4g 4g	B &	B &	B &	gg Qg	B 8	dd VQ	\$ &	B &	₽ . <del>8</del>	B &	Query Ma Best Loc Matches	Sourc	SEATIFIC
841 CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTT  898 ACCCTGCGCGCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCT	778 AAGCGGITGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCCGTGAG	718 CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCGTGCCCGTGGGCGACATCCCCCCCTGGAGCAGCACCATCCCCGTGGGGAGACCATCCCCGATGGGCGACATCCCCGATGGGGAGACCATCCCCGATGGGGAGGAGCATGGCCAGCAGATGACCAGCAACCCCCCCATCCCCGTGGGAGCATCCCCGATGGGGAGCATGACCATCCCCGATGGGGAGGACATCCCCGATGGGGAGACATCCCCGATGGGGAGGACATCCCCGATGGGGAGACATCCCCGATGGGGAGGACATCCCCGATGGGGAGGACATCCCCGATGGGGAGGACATCCCCGGACATCCCCGATGGGGAGCATGACCATGGGGAGACATCCCCGGAGGACATCCCCGGACATCCCCGATGGGGAGCACATCCCCGGACATCCCCGATGGGAGACATCCCCGATGGGAGACATCCCCGGACATCCCCGGACATCCCCGATGGGAGCAACCATCCCCGGACATCCCCGGACATCCCCGATGGAGCAACCATCCCCGATGGAGGAACCATCCCCGATGGAGGAACCATCATGACCAACATCCCCGGACAACCATCCCCGATGGAGCAACCATCCCCGATGGAGCAACCATCATGACATATATAT	658 GTGGCCCCGGGCCAGATGCGCGACCCCGCGCGCACCAGCCAG	598 GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTGCAGGCCGG	538 GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTV	478 GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCC	418 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGA	361 GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGGGCCAGAGCCAGAACCTACCCCATCGTGCAGAACCTGCAGGGCCAGAGCCAGAACCTACCCCATCGTGCAGAACCTGCAGGGCCAGAGCCAGAACCAGGCCAGAACCTACCCCATCGTGCAGAACCTGCAGGGCCAGAACCAGAACCAGAACCAGAACCAGGGCCAAGGGCCAGAACCAGAACCAGAACCAGAACCAGGGCCAAGAACAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAGAACCAACAGAACCAGAACCAGAACAAACAAGAACAAGAACAAGAACAAGAACAAACAAAACAAAACAAAACAAAACAAAAAA	301 CTGGACAAGATCGAGGAGGAGGAGCAGACAAGTCCCAGCAGAAGACCCAGCAGGCCAA(	241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGACACCAACGACACCAAGGACACCAACGACACCAAGGACACCAACGACACCAAGGACACCAAGGACACCAACGAC	181 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTA	121 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCA 	61 CTGCGCCCCGGCGGCAAGAAGCACCTACATGCTGAAGCACCTGGTGTGGGCCAGCCG	1 ATGGGCGCCCGCGCAGCATCCTGCGCGGGCGAGAAGCTGGACAAGTGGGAGAAGAT	Match 84.6%; Score 1276.8; Local Similarity 92.5%; Pred. No. 4.1 mes 1399; Conservative 0; Mismatches	rce	Tootion/Onalifiero

1018 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCGCCACAAGGCCCGCCTG 1077	B & B &	Query Match 84.2%; Score 1271.2; DB 6; Length 1479; Best Local Similarity 91.8%; Pred. No. 1.6e-125; Matches 1388; Conservative 10; Mismatches 78; Indels 36; Gaps 4;  Oy 1 ATGGGCGCCGCGCCAGCATCCTGCGCGGCGAGAAGCTGGAGAAGATCCGC 60
8 GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCCTCTCGGCCCCGGCGCCACC	DD 424	source 11479 /organism="Human immunodeficiency virus 1" /mol_type="unassigned DNA" /db_xref="taxon:11676"  ORIGIN
898 ACCCTGCGCGCCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCTGCTG 957	Q <b>y</b>	Patent: WO 0226209-A 67 04-APR-2002; CHIRON CORPORATION (US) Location/Qualifiers
838 CTGGACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACTACGTGGACCGCCTTCTTCAAG 897	g Q	O'Hagar Singh,
778 AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC 837      :	D Q	SOURCE Human immunodeficiency virus 1 (HIV-1) ORGANISM Human immunodeficiency virus 1 ORGANISM Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate
718 CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGCCCGTGGGCGACATCTAC 777	ъ <i>8</i>	DEFINITION Sequence 67 from Patent WO0226209.  ACCESSION AX468547  VERSION AX468547.1 GI:21901377
658 GTGGCCCCCGGCCAGATGCGCGACCCCCCCGCGCACCATCGCCGGCCCCCAGCACC 717	Qy dd	
598 GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTGCAGGCCGGCC	₽ <b>Q</b>	Qy 1498 CTGAGCCAGTAA 1509             Db 1468 CTGAGCCAGTAA 1479
538 GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG 597	Db Oy	Qy 1438 GACCGCGAGCCCTACCGCGAGCCCCTGACCGCCCTGCGCAGCCTGTTCGGCAGCCGCCCC 1497
478 GCCTTCAGCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCAG 537	B &	QY 1378 CCCCCGCCGAGAGCCTTCCGCTTCGAGGAGACCACCCCCCCC
418 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG 477	B &	QY 1318 CGCCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCC
361 GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG 417 [	B &	QY 1258 AAGGACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCAAGAGGGC 1317
301 CTGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCAGCAGGACGAGGAG 360	<i> </i>	QY 1198 AACTGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGATG 1257
241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGAGGCC 300	용 <i>성</i>	QY 1138 AAGGGCCCCCGGCGCAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCGAAG 1197
181 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACCAGGAGGAGCTGCGCAGCCTGTACAAC 240	g Q	QY 1078 CTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGATGCAGAAGAGCAACTTC 1137 (
121 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATC 180	Db 99	QY 1018 CTGGAGGAGATGATGACCGCCTGCCAGGGCCTGGGGGGCGCCCACAAGGCCCGCGTG 1077
61 CTGCGCCCCGGCGGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGCGAG 120	Qy db	OY 958 GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCGC
1 ATGGGCGCCCGCGCCAGCATCCTGCGCGGCGCCAAGCTGGACGCCTGGGAGCGCATCCGC 60	db	Db 901 ACCCTGCGCGCGAGCAGCACCCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTG 960

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181	QY 121 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATC 180	QY 61 CTGCGCCCCGGCGGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGCGAG 120	1 ATGGGCGCCCGCGCCAGCATCCTGCGCGGCGAGAAGCTGGACAAGTGGGAGAAGA 	Query Match 83.6%; Score 1260.8; DB 6; Length 1479; Best Local Similarity 91.9%; Pred. No. 2e-124; Matches 1389; Conservative 0; Mismatches 87; Indels 36; Gaps 4;	/db_xref="taxon:32630" /note="synthetic Gag coding sequence of HIV strain AP110965"	tion/Qualifiers 1479 nism="synthetic construct"	cleotides encoding antigenic hiv type c polypeptides, ptides and uses thereof; Who 0204493 A 20 17-JAN-2002; CORROBATION (US) . This persion of Stellenbosch (Zh)	NISM synthetic construct artificial sequences. NCB 1	GI:21714896	AX455904	Db 1468 CTGAGCCAGTAA 1479	1438 GACCGCGAGCCCT	1378 CCCCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCGCCCCCAAGCAGGCCCAAG 1	CGCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCGCCCACCGGCCACCGCCCCCACCGCCCCCC	1258 AASGACIGCACCGAGCGCCAGGCCAACTICCIGGGCAAGATCTGGCCCAGCCACAAGGGC 1258 AAGGACTGCACGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGC 1258 AAGGACTGCACGAGCGCCAAGGCCAAGATCTGGCCACAAGGGC 1258 AAGGACTGCAGGCCAAGATCTGGCCAGCCACAAGGGC	1130 ARCIGCOCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGCCCACCAGATG	1138 AAGGGCCCCCGSCGCATCGTSAAGTGCTTCAACTGCGCAAGGAGGGCCACATCGCCCGC  1138 AAGGGCCCCCGSCGCATCGTSAAGTGCTTCAACTGCGGCAAGGAGGAGGACCACATCGCCCGC	1138
Oy 1258 AAGGACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGC 1317	98 AACTGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGATG	138 AAGGGCCCCGGCGCAACGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCAAG 	1078 CTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGATGCAGAAGAGCAACTTC	018 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCCGCGGCCCACAAGGCCCGCGTG	QY 958 GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGGGGCTCTCGGCCCCGGCGCCACC 1017	QY 898 ACCCTGCGCGCGAGCAGGCAGGCAGGACGTGAAGAACTGGATGACCGAGACCCTGCTG 957	QY 838 CTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG 897	QY 778 AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC 837	Qy 718 CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGGCCCGTGGGCGACATCTAC 777	Qy 658 GTGGCCCCGGCCAGATGCGCCAGCACCCCCGCGGCAGCACCACCAGCCACCACCAGCACC 717	Qy 598 GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTGCAGGCCGGCC	Qy 538 GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG 597	Qy 478 GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCAG 537	Oy 418 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG 477	Qy 361 GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG 417	Qy 301 CTGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCAGCAGGCCCAGCAAGGAG 360	Qy 241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCCAAGGAGGCC 300	Db 181 ATCCGCCAGCTGCACCCCCGCCCTGCAGACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAAC 240

\$ \$ \$ \$ \$ \$ \$	9 Q D Q	Query M Best Lo Matches Qy	FEATURES BOURG	SOURCE SOURCE ORGANISM ORGANISM REPERENCE RUTHORS TITLE	RESULT 12 AX149648 LOCUS DEPINITION ACCESSION VERSION	Qy 1 Db 1	99 1 99 1 99 1	
181 ATGAAGCAGCTGCAGCCCGCCTTGCAGACCGGCACCGAGGAGCTGCGAGCCTGTACAAC 240	CTGCGCCCCGGCGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCCAGCCGCGAGCCTGCAGCCCGCCGAGCCGCGAGCCTGCTGAAGCACCTGGTGTGGGCCAGCCA	Query Match 79.7%; Score 1202.2; DB 6; Length 4288;  Best Local Similarity 88.5%; Pred. No. 2.3e-118;  Matches 1335; Conservative 0; Mismatches 153; Indels 21; Gaps 2;  1 ATGGGCGCCGCGCCAGCATCCTGCGCGGCGAGAAGCTGGACAAGTGGGAGAAGATCCAGG 72  13 ATGGGCGCCAGGGCCAGCATCCTGAGGGGCGGCAAGCTGGACAAGTGGGAGAAGATCAGG 72	O	Human immunodeficiency virus  Human immunodeficiency virus  Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate  lentivirus group.  Shao, Y., Wagner, R., Wolf, H. and Graf, M.  Shao, Y., Wagner, R., Wolf, H. and Graf, M.  The genome of the hiv-1 inter-subtype (c/b') and use thereof	AX149648 4288 bp DNA linear PAT 08-JUN-2001 V Sequence 2 from Patent WO0136614. AX149648 AX149648.1 GI:14348047	1498 CTGAGCCAGTAA 1509 	1378 CCCCCCCCAGAGACTICCACTICGAGGAGACCACCCCCCCCCC	318 CGCCCCGGCAACTTCCTGCAGAACCGCAGCGAGCGAGCCGCCCCCCCC
B & B & B & B	\$ B \$ B \$	) B Q B Q	9 9 9 99 9 90 90	0 0 0 0 0 0	D Q D Q	, D Q	B & B &	9
1270 GACTGCACCGAGAGGCCAGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACCACAGGGCCGCCAGGCCACCGAGGCCACCGAGGCCAGCCAAGGGCCGCC	1150 GGCAGCAAGAAGAAGTTGCTTCAACTTGCGGCAAGGAGGGCCACATCGCCAGGAAGCAAGTTGAACTTGCGGCAAGGAGGGCCACATCGCCAGGAAGAAGTTGCTTGAACTTGCGGCAAGGAGGGCCACCAGAATGAAGTTGAACTTGCGGGAAGGAGGGGCCACCAGAATGAAGTTAAAGTTGCGGCAAGGAGGGCCACCAGAATGAAGTTAAAGTTGCAGGGCCACCAGAAGAAGAAGGGCCACCAGAATGAAGAAGTTGCTTGGAAGGAA	021 GAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCGGCCACAAGGCCCGCCACAAGGCCCGCCACAAGGCCCGCCACAAGGCCCACAAGGCCCACAAGGCCACAAGGCCACAAGGCCACAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAAGGCCAACAGGCCAACAGGCCAACAGCGTGAACATCATGATGCAGAAGAAGAAGAACAACTTAAGAAGCAACTTAAGAGCCAACATCATGATGCAGAGGAAGAAGAACAACTTAAGAGCCAACATCATGATGCAGAGGAAGAAGAACAACTTAAGAGCCAACCTAAGAGCCAACCTAAGAGGCCAACCTAAGAGGCCAACCTAAGAGGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGGAGCCAACCTAAGAGAGGAGCCAACCTAAGAGGAGGCAACCTAAGAGGAGGCAACCTAAGAGAGGAGCAACCTAAGAGAGGAGCAACCTAAGAGAGGAGCAACCTAAGAGAGGAGCAACCTAAGAGAGGAGCAACCTAAGAGAGGAGCAACCTAAGAGAGAG	901 CTGCGCGCCGAGCAGCCCACCCAGGACGTGAAGAAC	781 CGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATCCTG	61 GCCCCCGGCCAGATGCGCGACCCCCGCGGCAGCACATCGCCGGCGCCACCAGCACACACCAGCACATCGCCGGCCCAGCAGCACATCGCCGGCGCCAGCACCAGCACACCAGCACATCGCCCGGCCAGCAGCAGCAGCAGCAGCAGCAACCCCCGGCACCAC	CGTGCAGGCCGGCCC		GCCATCAGCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGA 

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1 (megede,J., Chen,M.C., Doe,B., Schaefer,M., Selby,M., Otten,G.R. and Barnett,S.W.

Increased expression and immunogenicity of sequimmunodeficiency virus type 1 gag gene
J. Virol. 74 (6), 2628-2635 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (04-NOV-1999) Vaccines, 
Emeryville, CA 94608, USA
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Direct Submission
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ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGAACACCAAGGAGGCC
                                                                 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTACAAC
                                                                                                        CTGGAGCGCTTCGCCGTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCCCCCAGATC
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                                               CTGGGCCAGCTGCAGCCTGCAGACCGGCAGCAGGGAGCTGCGCAGCCTGTACAAC
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/protein_id="AAF43628.1"
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/translation="MGARASVLSGGBLDKWBKIRLRPGGKKKYKLKHIVWASRELERF
/translation="MGARASVLSGGBLDKWBKIRLRPGGWHQAIDYKDTKBALB
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VBEKAFSPBVIPMFSALSEGATPQDLNTMLNTVGGHQAMQMLKETINEBAAEWDRVH
PVHAGPIAPGQMREPRGSDIAGTTSTLQEQIGMMTNNPPIPVGBIYKRWIILGLNKIV
RMYSPTSILDIRQGPKBPFRDYVDRFYKTLRAEQASQDVKNMMTETLLVQNANPDCKT
ILKALGPAATLEEMMTACQGVGGPGHKARVLAEAMSQVTNPATIMMQRGNFRNQRKTV
KCFNCGKEGHTARNCRAPRKKGCWRCGREGHQMKDCTERQANFLGKIWPSYKGRPGNF
LQSRPBPTAPPRESFRFGBBKTTPSQKQBPIDKBLYPLTSLRSLFGNDPSSQ"
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mol_type="genomic DNA"
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Matches 1351; Conservative
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OS Artificial Sequence
PN JP 2002533124-A/4
PD 08-OCT-2002
PP 30-DEC-1999 JP 2000591193
PR 31-DEC-1998 US 60/114495,01-DEC-1999 US 60/168471 PI
SUSAN BARNETT,JAN ZUR MEGEDE,INDRESH SRIVASTAVA,YING LIAN, PI
KARIN HARTOG,
PI HONG LIU,CATHERINE GREER,MARK SELBY,CHRISTOPHER WALKER PC
C12N15/09,A61K31/711,A61K38/00,A61K48/00,A61F31/18,A61F37/02, PC
C12N5/10,
PC C12N7/00,C12P21/02,C12N15/00,C12N5/00,A61K37/02 CC
Description of Artificial Sequence: synthetic HIV-Gag PH Key
Location/Qualifiers
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1 (bases 1 to 1515)

1 (bases 1 to 1515)

Barnett,S., Megede,J.Z., Srivastava,I.,
Greer,C., Selby,M. and Walker,C.
Improved expression of HIV polypeptides
virus-like particles
Patent: JP 2002533124-A 4 08-OCT-2002;
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Location/Qualifiers
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
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Pred. No. 4.1e-118;
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Qy  241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGAGGCC 300  [	61 CTGCGCCCCGGCGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGAGAG 1	source 1.1515  /organism="unknown" /organism="unknown" /mol_type="genomic DNA"  RIGIN  Plant	AR373320 ION Sequence N AR373320 AR373320  ON AR373320 ION	Qy       1303       CCCAGCCACAAGGGCCGCCCCGGCAACTTCCTGCAGAACCGCAGCCAGC
Qy 1303 CCCAGCCACAAGGGCCCCCGGCAACTTCCTGCAGAACCGCAGCCAGC	1123 CAGAAGAGCAACTTCAAGGGCCCCCGGGGCAACGTCAAGTGCTTCAACTGCGGCAAGGAG	946 GAGACCCTGCTGCTGCAGAACGCCAACCCCGACTGCAAGACCATCCTCGCCGCTCTCGGC	CCTGCAGGAGCAGATCGGCTGGATGACCAACAACCCCCCCATCC CAAGCGGTGGATCATCCTGGGCTGAACAAGATCGTGCGGATGT [	CGAGGAGA

Search completed: June 1, 2004, 13:09:33 Job time : 5857 secs

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Result
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Listing first 45 summaries
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Maximum DB seg length: 200000000
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2: /cgn2_6/ptodata/1/pubpna/PCT_NEW_PUB.seq:*
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Copyright (c) 1993 - 2004 Compugen Ltd.
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US-10-190-435-16
US-10-190-435-19
US-10-190-435-35
US-10-190-435-36
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US-10-190-435-36
US-10-190-435-38
US-10-190-435-17
US-10-190-305A-13
US-10-190-305A-13
US-10-190-305A-15
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Sequence 63, Appli
Sequence 3, Appli
Sequence 18, Appl
Sequence 16, Appl
Sequence 19, Appl
Sequence 14, Appl
Sequence 34, Appl
Sequence 36, Appl
Sequence 36, Appl
Sequence 38, Appl
Sequence 17, Appl
Sequence 17, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 13, Appl
Sequence 15, Appl
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18,	18,	73,	74,	76	75	4	17		21	83	64	4	51	99,	15	14,	13,	20,	Sequence 81, Appl	57,	67,	82,	58,	83,	59,	12,	•	11,	W	Sequence 9, Appli

## ALIGNMENTS

Sequence 63, Application US/0996; Publication No. US20030138453A1; GENERAL INFORMATION: APPLICANT: O'Hagan, Derek; APPLICANT: Otten, Gillis; APPLICANT: Donnelly, John J. APPLICANT: Polo, John M.

US-09-967-464-63

Application US/09967464 US20030138453A1

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; LENGTH: 1479
; TYPB: DNA
; ORGANISM: Human immunodeficiency virus type
US-09-967-464-63
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                                                                                                         Best Local Similarity Matches 1479; Conserv
                                                                                                                                                          Query Match
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APPLICANT: Singh, Mamohan
APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
APPLICANT: Ulmer, Jeffrey
APPLICANT: Dubensky, Jr., Thomas W.
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS
FILE REFERENCE: PP16269.004
CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR APPLICATION NUMBER: 60/315,905
PRIOR APPLICATION NUMBER: 60/315,905
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 68
                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn version 3.1
                             ATGGGCGCCCGCGCAGCATCCTGCGCGGCGCAAGCTGGACGCCTGGGAGCGCATCCGC
                                                                                                     100.0%; Score 1479; DB 10; Length 1479; 100.0%; Pred. No. 6.9e-303; :ive 0; Mismatches 0; Indels 0;
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1080	21 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCGCCCAGCCACAAGGCCCGCGTG	10
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1141 GGCCCCCGGCGCATCGTCAAGTGCTTCAACTGCGGCAAGGAGGCCACATCGCCCGCAAC 1200

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APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan
APPLICANT: Egnelbrecht, Susan
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO
SEQ ID NO
LENGTH: 1479
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Publication No. US20030223961A1
GENERAL INFORMATION:
APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan
                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 1479; DB 13; Best Local Similarity 100.0%; Pred. No. 6.9e-303; Matches 1479; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag
OTHER INFORMATION: of HIV strain AP110965
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ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC
                                                                    ATCCGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGAGGAGCTGAAGAGCCTGTTCAAC
                                                                                                                    CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC
                                                                                                                                                                                    CTGCGCCCCGGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGGCCAGCCGAG
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CTGGCCGAGGCCATGAGCCAGGCCAACACCAGCGTGATGATGCAGAAGAGAGCAACTTCAAG
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                                                                                                                                    TGCCGCGCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGGCCACCAGATGAAG
                                                                                                                                                                                  GGCCCCCGGCGCATCGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCCGCAAC
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Sequence 18, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MBGEDE, Jan
APPLICANT: ZUR MBGEDE, Jan
APPLICANT: LIAN, Ying
; APPLICANT: LIAN, Ying
; APPLICANT: WAN RENSBURG, Betrelita J.
; APPLICANT: WAN RENSBURG, Betrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOPTWARE: PatentIn Ver. 2.0
; SEO ID NO 18
; LENGTH: 3162
; TYPE: DNA
; ORGANISM: Artificial Sequence
; PEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GagRTmut_C
US-10-190-435-18
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Best Local Similarity 99.9%;
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                                             GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCCATCGTGCAGAACCTGCAGGGCCAGATG 420
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                                                                                                                                                                                   CTGGACAAGATCGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC
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RESULT 4
US-10-190-435-16
; Sequence 16, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDB, Jan
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; OTHER INFORMATION: Description
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APPLICANT: LIAN, Ying
APPLICANT: ENGELBRECHT, SUBAN
APPLICANT: ENGELBRECHT, SUBAN
APPLICANT: VAN RENSBURG, Betrelita J.
APPLICANT: VAN RENSBURG, Betrelita J.
TITLE OF INVENTION: POLYMETIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYMETIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133
CURRENT APPLICATION NUMBER: US/10/190,435
CURRENT PILING DATE: 2002-12-30
NUMBER OF SEQ ID NOS: 319
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 16
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Best Local Similarity
Matches 1478; Conserva
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TYPB: DNA
ORGANISM: Artificial Sequence
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CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCATCCCCGTGGGCGACATCTAC
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Pred. No. 1.5e-302;
0; Mismatches 1; I
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RESULT 5

US-10-190-435-19

Sequence 19, Application US/10190435

Publication No. US20030143248A1

GENERAL INFORMATION:
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, SUBBAN W.
APPLICANT: LIAN, Ying
APPLICANT: ENGELBRECHT, Susan
APPLICANT: WAN RENSBURG, Estrelita J.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYNUCLEOTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133

CURRENT APPLICATION NUMBER: US/10/190,435

CURRENT FILING DATE: 2002-12-30

NUMBER OF SEQ ID NOS: 319

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 19

LENGTH: 4419

TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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; OTHER INFORMATION: Description of Artificial Sequence: GagRTmutTatRevNef_US-10-190-435-19
GIGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCGGCGCCCAGC
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Pred. No. 1.4e-302;
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, <b>8</b>	Q Q	B &	Query Ma Best Loc Matches	PEATUR POTHER OTHER OTHER US-10-190-	SEQ ID NO 14 ; LENGTH: 4419 ; TYPE: DNA	CURRENT CURRENT CORRENT CORREN	APPLIC APPLIC TITLE (	; Sequenc ; Publica ; GENERAL ; APPLIC	RESULT 6 US-10-190-305A-	B &	gg Qy	B 8	Db Q	B 8	B 8	문 <i>성</i>	g &	DЬ
121 CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC 180	61 CTGCGCCCCGGCGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCCAGCCGCGAG 120	1 ATGGGCGCCCGCGCCAGCATCCTGCGCGGCGCAAGCTGGACGCCTGGGAGCGCATCCGC 60	Match 99.9%; Score 1477.4; DB 15; Length 4419; Local Similarity 99.9%; Pred. No. 1.4e-302; 198 1478; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	US: ILITICIAL DENGLES INFORMATION: Descripti INFORMATION: GagRTmutT 305A-14	NO 14 II: 4419 DNA TONA	CURRENT APPLICATION NUMBER: US/10/190,305A; CURRENT PILING DATE: 2002-07-05; NUMBER OF SEQ ID NOS: 93  SOPTWARR. Datent In Ver. 2:0	ANT: LIAN, Ying ANT: LIAN, Ying PINVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE B AND/OR OF INVENTION: TYPE C POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF	Sequence 14, Application US/10190305A Publication No. US20030198621A1 GENERAL INFORMATION: APPLICANT: ZUR MEGEDE, Jan APPLICANT: ZUR MEGEDE, Jan	-305A-14	1441 CTGAAGAGCCTGTTCGGCAACGACCCCCTGAGCCAGTAA 1479	1381 TTCGAGGAGACCACCCCCGGCCAGAAGCAGGAGCAGGAGCAGGAACCGCGAGACCCTGACCAGC 1440	1321 CCCGGCAACTTCCTGCAGAGCCGCCCCGAGGCCCACCGCCCCCCCC	1261 GACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGCCGC 1320	1201 TGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCCACCAGATGAAG 1260	1141 GGCCCCCGGCGCATCGTCAAGTGCTTCAACTGCGGCAAGGAGGAGGCCACATCGCCCGCAAC 1200	1081 CTGGCCGAGGCGATGAGCCAGGCCAACACCAGCGTGATGATGCAGAAGAGCAACTTCAAG 1140	1021 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCAGCCACAAGGCCCGCGTG 1080	967 GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCGC
D <b>b</b>	?	S & 8	5 B 8	) B &	유 <i>청</i>	B &	yQ dd	유 성	<b>Q</b>	당 상	유 왕	B 8	문 <i>첫</i>	<u> </u>	<u> </u>	B &	B 8	망
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Qy  181 ATCCGCCAGCTGCACCCCGCCCTGCAGACCGGCAGGGAGGCTGAAGAGCCTGTTCAAC 240	Qy 61 CTGCGCCCGGCGGCAAGAAGTGCTACATGAAGCACCTGGTGTGGGCCAGCCGCGAG 120	Query Match Best Local S Matches 1478 1	SEQ ID NO 35 LENGTH: 4483 TYPE: DNA ORGANISM: Artificial Sequ PEATURE: PEATURE: OTHER INFORMATION: Descri OTHER INFORMATION: 9p160m	VAN RENSBURG IVENTION: POLY IVENTION: POLY INCB: PP18133.0 VLICATION NUMBI ING DATE: 200 SEQ ID NOS: 315	US-10-190-435-35 ; Sequence 35, Application US/10190435 ; Publication No. US20030143248A1 ; GENERAL INFORMATION: ; APPLICANT: ZUR MEGEDE, Jan ; APPLICANT: BARNETT, Susan W. ; APPLICANT: LIAN, Ying ; APPLICANT: LIAN, Ying	DB 1387 TTCGÁGGÁGÁCCÁCCCCCGGCCÁGÁGÁGCÁGGÁGÁGAGCCGGÁGÁCCCTGÁCCÁGC 1446  QY 1441 CTGAAGAGCCTGTTCGGCAACGACCCCCTGAGCCAGTAA 1479	Db         1327         CCCGGCAACTTCCTGCAGAGCCCGGCCCGGAGAGCCCGCCGGCGAGAGCTTCCGC         1386           Qy         1381         TTCGAGGAGACCCCCCGGGCCAGAAGCAAGGAAGCAAGGACCCTGACCAGC         1440	Db 1267 GACTGCACCGAGGCCCAGCCCCAGCCCAACTTCCTGGGCAAAGATCTGGCCCAGCCCACAAGGGCCCGC 1326  OY 1321 CCCGGCAACTTCCTGCAGAGCCGCCCGGAGGCCCACCGCCGAGAGGCTTCCGC 1380	QY 1261 GACTGCACCGAGCCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGCCGC 1320
5	B & B &	2	B & B &	D	0	B. 8 B 8	gb Qy	Qу	σb
1261 GACTGCACCGAGCCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGCCGC 1320	145 GGCCCCCGGCATCGTCAAGTGCTTCAACTGCCGCAAGGAGGGCCACATCGCCCGCAAC 201 TGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCCGGCAAGGAGGAGGGCCACCAGATGAAG	CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCAGCCACAAGGCCCGCGTG	901 ACCCTGCGCCGAGCAGAGCACCCCAGGAGGTGAAAAACTTGGATGACCGACACCCTGCTG 960	781 AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC 840	661 ATCGCCCCCGGCCAGATGCGCGAGCCCCCGCGGCAGCAATCGCCGGCACCACCACCAGCACC 720	541 GACCTGAACACGATGTTGAACACCGTGGGCGCCACCAGGCCGCCATGCAGATGCTGAAG 600	CCCAG 	421 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG 480 	

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Sequence 34, Application US/10190435;

Sequence 34, Application US/10190435;

Publication No. US20030143248A1

GENERAL INFORMATION:

APPLICANT: ENERNET, SUSAN W.

APPLICANT: LIAN, Ying

APPLICANT: ENGELBRECHT, SUSAN

APPLICANT: WAN RENSBURG, Estrelita J.

TITLE OF INVENTION: POLYNUCLECTIORS ENCODING ANTIGENIC HIV TYPE C

TITLE OF INVENTION: POLYNUCLECTIORS POLYPEPTIDES AND USES THEREOF

FILE REFERENCE: PP18133.003 / 2302-18133

CURRENT APPLICATION NUMBER: US/10/190,435

CURRENT APPLICATION NUMBER: US/10/190,435

CURRENT FILING DATE: 2002-12-30

NUMBER OF SEQ ID NOS: 319

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 34

LENGTH: 4606

TYPE: DNA

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence:

OTHER INFORMATION: gp160mod.TV1.dV1-gagmod.BW965

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Best Local Similarity
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Pred. No. 1.4e-302;
0; Mismatches 1;
                                                           TCACCGCCTGAGCGAGGGCGCCACCCCCAG
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RESULT 9
US-10-190-435-36
; Sequence 36, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
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: FILE REFERENCE: PP18133.003 / 2302-18133
: CURRENT APPLICATION NUMBER: US/10/190,435
: CURRENT FILING DATE: 2002-12-30
: NUMBER OF SEQ ID NOS: 319
: SOPTWARE: PatentIn Ver. 2.0
: SEQ ID NO 36
: LENGTH: 4615
: TYPE: DNA
: ORGANISM: Artificial Sequence
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Best Local Similarity 99.9%;
Matches 1478; Conservative
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OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: gp160mod.TV1.dV2-gagmod.BW965
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US-10-190-435-38
; Sequence 38, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLECTIDES ENCODING ANTIGENIC HIV
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES TO PILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SEQ ID NO 38
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 Query Match
                                               OTHER INFORMATION: OTHER INFORMATION:
                                                                             LENGTH: 4702
TYPB: DNA
ORGANISM: Artificial Sequence
FEATURE:
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                                              Description of Artificial gp160mod.TV1-gagmod.BW965
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 Score 1477.4;
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Indels 0;	WENT APPLICATION NUMBER: US/10/190,435 WENT FILING DATE: 2002-12-30 BER OF SEQ ID NOS: 319 FWARE: Patentin Ver. 2.0 FWARE	RESULT 11  US-10-190-435-17  ; Sequence 17, Application US/10190435 ; Publication No. US20030143248A1 ; GENERAL INFORMATION: ; APPLICANT: ZUR MEGEDE, Jan ; APPLICANT: BARNETT, Susan W. ; APPLICANT: LIAN, Ying ; APPLICANT: ENGELBRECHT, Susan ; APPLICANT: VAN RENSBURG, Estrelita J. ; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C ; TITLE OF INVENTION: POLYNUCLEOTIDES, POLYPEPTIDES AND USES THEREOF ; FILE REFERENCE: PP18133.003 / 2302-18133	Oy  1321 CCCGGCAACTTCCTGCAGAGCCCAGAGCCCACCCCCGAGAGCTTCGC	4244 CTGGAGGAGATGATGACCGCCTGCCAGGCGTGAGGCCCAGCCAG

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                                                        TGCCGCGCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGATGAAG
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Sequence 13, Application US/10190305A

Publication No. US20030198621A1

GENERAL INFORMATION:
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, SUSAN
APPLICANT: LIAN, Ying
TITLE OF INVENTION: TYPE C POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: 2302-18702 / 18702.002
CURRENT APPLICATION UMBER: US/10/190,305A
CURRENT FILING DATE: 2002-07-05
NUMBER OF SEQ ID NOS: 93
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 13
LENGTH: 4716
TYPE: DNA
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; FEATURE:
; OTHER INFORMATION: Description of Artificial
; OTHER INFORMATION: GagProtInaRTmutTatRevNef_C
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Best Local Similarity 99.9%;
Matches 1478; Conservative
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    ATCGCCCCCGGCCAGATGCGCGAGCCCCGCGGCACATCGCCGGCACCACCAGCACC
                                                              GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG
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; Sequence 20, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: LIAN, Ying
; APPLICANT: LIAN, Ying
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: ENGELBRECHT, Susan
; APPLICANT: VAN RENSBURG, Estrelita J.
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
; TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
; PILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOPTWARE: Patentin Ver. 2.0
; SEQ ID NO 20
; LENGTH: 2742
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FORTHER INFORMATION: Description of Artificial Sequence: GagTatRevNef_CUS-10-190-435-20
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Best Local Similarity 99.9%;
Matches 1477; Conservative
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US-10-190-305A-15

; Sequence 15, Application US/10190305A

; Publication No. US20030198621A1

; GENERAL INFORMATION:

; APPLICANT: ZUR MEGEDE, Jan

APPLICANT: LIAN, Ying

: TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV

: TITLE OF INVENTION: TYPE C POLYPEPTIDES, POLYPEPTIDES AND

: FILE REFERENCE: 2302-18702.002

; CURRENT APPLICATION NUMBER: US/10/190,305A

; CURRENT FILING DATE: 2002-07-05

; NUMBER OF SEQ ID NOS: 93

; SOPTWARE: PatentIn Ver. 2.0

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Pred. No. 3.2e-302;
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RESULT 15 US-10-190-435-9 US-10-190-435-9 US-10-190-435-9 US-10-190-435-9  US-10-190-435-9  IS-QUADRO No. US20030143248A1  GENERAL INFORMATION: DAN US20030143248A1  GENERAL INFORMATION: JAPLICANT: ZUR MEGEDE, Jan APPLICANT: LINFORMATION: APPLICANT: LINFORMATION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIDES ENCODING ANTIGENIC HIV TYPE C 11TLE OF INVENTION: POLYMOCLEGOTIC AND OSES THEREOF 11TLE OSES	Qy 961 GTGCAGAACGCCAACCCCGACTTCCTAGAGACCATCCTCGGCCCCGGCCCCAGC 1020
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			TTCGAGGAGACCACCCCGGCCAGAAGGAGCAGGAGGACCAGGGAGACCCTGACCAGC 1446	TTCGAGGAGACCACCCCCGGCCAGAAGCAGGAGAGCAAGGACCGCGAGACCCTGACCAGC 1440	CCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCACCGCCCCCCCC	CCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCCACCGCCCCCCCGCGAGAGCTTCCGC 1380	GACTGCACCGAGCCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGCCGC 1326	1320	1266	1260
			46	40	98	90	26	20	99	60

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Maximum Match 100%
Listing first 45 summaries
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Match
 IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
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ABL39953
ADC13237
ACA03523
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ADC13259
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ADC13231
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Adc13232
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Synthetic DNA of HI Synthetic DNA of HI Synthetic DNA of HI Synthetic
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HIV-1 p55
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AAA51609 standard; DNA; 1479

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ALIGNMENTS	ADC13278 AAA51625 ABL39957 AAAL44552 ADC13256 ADC13234 ADC13234 ADC13235 ADC13235 ADC13235 ADC13235 ABL40020 ABL39972 AAA51610 ABL39954 AABL39954 AABL39958 AAA51626 AABL44553 ABK91626 AAAL44553 ABK91616 ABK91622 AAA70472	
	Adc13278 DNA of HI Aaa51625 HIV codon Abl39957 Synthetic Aal44552 HIV-1 p55 Adc13255 DNA of HI Adc13256 DNA of HI Adc13236 DNA of HI Adc13236 DNA of HI Adc13235 DNA of HI Adc13236 DNA of HI Adc13236 DNA of HI Adc13235 DNA	

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RESULT 1
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CAG;
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                                                                                                                                          Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially
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P-PSDB; AAY96943.
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01-SEP-1999;
                                   Claim 2; Page 92-93; 113pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; expression cassette; antigenic; type C; HIV; Env; synthetic; immunization; packaging cell line; antigen presentation; ss.
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/product= "Synthetic_Gag"
/note= "Codon usage pattern was modified and inhibitory
elements (INS) and RRE sites were inactivated resulting
in improved expression"
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Best Local Similarity
Matches 1479; Conserv
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CTGAAGAGCCTGTTCGGCAACGACCCCCTGAGCCAGTAA
            CTGAAGAGCCIGITCGGCAACGACCCCCTGAGCCAGTAA 1479
                                                                                          CCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCCACCGCCCCCCGAGAGCTTCCGC
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RESULT 2
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A 29-AUG-2003 08-NOV-2002 AAL44548; AAL44548 standard; (revised)
(first ent polypeptide coding sequence entry) 1479 ₽₽

p55gag

HIV; ds; vaccine; gene; immune response; microparticle; adsorbent surface; poly(alpha-hydroxy acid); polyhydroxy butyric polycaprolactone; polyorthoester; polycyanoacrylate; detergent; submicron emulsion; viral infection; bacterial infection; parasitic infection; HIV-1 p55gag polypeptide.

immunodeficiency virus 1.

WO200226209-A2

28-SEP-2001; 2001WO-US030540

28-SEP-2000; 2000US-0236105P 30-AUG-2001; 2001US-0315905P

(CHIR ) CHIRON CORP

841

CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A microparticle to which a biologically active macromolecule is adsorbed, for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a submicron emulsion.
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Ulmer J, Dubensky TW;
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ABL39953 standard; DNA; 1479 ВP

ABL39953

15-MAY-2002 entry)

Gag polynucleotide sequence SEQ ID NO:3.

RESULT 3
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ID ABL3
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AC ABL3
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DT 15-M
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DE Synt
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DE Synt
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KW Huma
KW immu
XX Human immunodeficiency virus type C; antigenic HIV type C protein; immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; vpu; env; immunostimulant; gene therapy; gene; ds. nef;

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Best Local Similarity 100.0%;
Matches 1479; Conservative 0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New polynucleotides encoding antigenic HIV Type C polypeptides, useful in applications including DNA immunization or generation of packaging cell lines, particularly in gene therapy.
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1320 1320	GACTGCACCGAGCGCCAGCCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGCCGC	1261 1261	용 성
126 126	TGCCGCGCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGATGAAG	1201 1201	유 성
120 120	GGCCCCGGCGCATCGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCCGCAAC	1141 1141	용 성
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1020 1020	GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCCTCTCGGCCCCGGCGCCAGC	961 961	용 왕
960	ecre     GCTG	901 901	B 3
900	CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG	841 841	\$ \$
840 840	AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC	781 781	유 경
780 780	CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCATCCCCGTGGGCGACATCTAC	721 721	B &
720 720	ATCGCCCCCGGCCAGATGCGCGAGCCCCGCGGCAGCACCATCGCCGGCACCACCAGCACC	661 661	B 8
099	3990000 	تر ت	B &
600	GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG	541 541	B 8
540 540	GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCAGGCCTTCAGCCAGGCCCCGAGGCGAGGGCGCCACCCCCAGGCCTTCAGCCAGGCGAGGGCGCCACCCCCAGGCCTTCAGCGAGGGGCGCCACCCCCCAGGCCCTGAGCGAGGGCGCCCACCCCCAGG	81 81	B &

RESULT 4
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ID ADC1

ADC13239 standard; DNA; 3162 BP.

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Best Local Similarity
Matches 1478; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                       New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, p15RmaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
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31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      expression cassette; HIV Gag; Env; Int; Nef; pl5RnaseH; Pol; Tat; Prot; Rev; HIV type C; gene therapy; vaccine; immunisation; HIV; ds.
                                                                                                                                                                                                                                         Sequence 3162 BP; 729 A; 1095 C; 975 G; 363 T; 0 U; 0 Other;
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Pred. No. 3.3e-185;
0; Mismatches 1;
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31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
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                                                                                                                                                                 h 99.9%; Score 1477.4; DB 9; Similarity 99.9%; Pred. No. 3.2e-185; 78; Conservative 0; Mismatches 1;
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CTGCGCCCCGGCGGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGCGAG
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The invention describes a synthetic polynucleotide encoding 2 or more immunogenic HIV polypeptides, where at least 2 of the polypeptides are derived from different HIV subtypes. The polynucleotide is useful for immunisation, generation of packaging cell lines, or production of HIV polypeptides. The polynucleotide and its encoded proteins are useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, or for inducing neutralising antibodies against HIV. The gene delivery vector comprising the polynucleotide is also useful for DNA immunisation of, or for generating an immune response (e.g. a humoral or cellular immune response) in, a subject such as a mammal, particularly a human. This sequence encodes a
                                                                                                                                                                                                                                                                                                          05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349728P.
16-JAN-2002; 2002US-0349793P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunogenic HIV polypeptide; human immunodeficiency virus; HIV; vaccine; gene therapy; packaging cell line; humoral immune response; cellular immune response; gene delivery vector; DNA immunisation; ds.
                                                                                                                                                                                  New synthetic polynucleotides encoding antigenic HIV type B and/or type polypeptides, useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject
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                                       ACCCTGCGCCCGAGCAGAGCACCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTG
                                                                                        CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG
                                                                                                                                      AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCCGTGAGCATC
                                                                                                                                                                                       CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCATCCCCGTGGGCGACATCTAC
                                                                                                                                                                                                                          ATCGCCCCGGGCCAGATGCGCGAGCCCCGGCGGCACCATCGCCGGCACCAGCACC
                                                                                                                                                                                                                                         ATCGCCCCGGCCAGATGCGCGAGCCCCCGCGGCAGCGACATCGCCGGCACCACCAGCACC
                                                                                                                                                                                                                                                                         GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCCATGCAGATGCTGAAG
                                                                                                                                                                                                                                                                                                                                                GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG
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   GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCCGGCGCCAGC
                                                                           CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG
                                                                                                                          AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC
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                           ACCCTGCGCGCCGAGCAGAGCACCCAGGAGGTGAAGAACTGGATGACCGACACCCCTGCTG
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RESULT 7
ADC13240
ID ADC1
XX
AC ADC1
XX
AC ADC1
XX
AC ADC1
XX
DE DNA
XX
Rev;
XX
CS Huma
XX
PD 16-J
XX
PF 05-J
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PF 16-J
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NEW
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             New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, pl5RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
                                                                                                                                                                   05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                           expression cassette; HIV Gag; I Rev; HIV type C; gene therapy;
                                                                                                                                                                                                                       05-JUL-2002; 2002WO-US021420
                                                                                                                                                                                                                                                16-JAN-2003
                                                                                                                                                                                                                                                                         WO2003004620-A2
                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                 DNA of HIV construct GagRTmutTatRevNef_C SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                             18-DEC-2003
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r; vaccine;
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immunisation; HIV; ds.
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The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy or used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intrarectally, orally or intravenously. The expression cassette is useful for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an HIV Type C related sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Fig 16;
                                                                                                                                                                                                                                                                                                                                                                       301pp; English.
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Sequence 4419 BP; 980 A; 1582 C; 1371 G; 486

T; 0 9;

U; 0 Other;

Length

4419

Similarity

99,98;

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RESULT 8
ADC13257
ID ADC1
XX
AC ADC1
XX
DT 18-I
XX
DE DNA
XX
DE DNA
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COS HUI
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            05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                     expression cassette; HIV Gag; Env; Int; Nef; pl5RnaseH; Pol; Tat; Prot; Rev; HIV type C; gene therapy; vaccine; immunisation; HIV; ds.
                                                                                                                                                                                                                ADC13257
                                                                                                                                                                      DNA of HIV construct gp160mod-TV1-dV2-gagmod-BW965 SEQ ID NO 36
                                                                                                                                                                                            18-DEC-2003
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                                                     05-JUL-2002; 2002WO-US021420
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                                                                                                                                                                                            (first entry)
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The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intrarectally, orally or intravenously. The expression cassette is u for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an importance of the invention.
                                                                                                                                                                                                                                                                         New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
                                                                                                                                                                                                                                          Disclosure; Fig 33; 301pp;
                                                                                                                                                                                                                                                                                                                                                                                              Zur Megede J,
                                                                                                                                                                                                                                                                                                                                                                                                                                   (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                 Barnett SW,
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                                                                    is useful HIV
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                                                      VIH
                                                                                                                                                         or
                                                                                                                                                                                           Env,
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SQ Sequence 4615 BP; 1030 A; 1587 C; 1354 G; 644 T; 0 U; 0 Other;

Query Match 99.9%; Score 1477.4; DB 9; Length 4615;

Best Local Similarity 99.9%; Pred. No. 3.1e-185;

Matches 1478; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

2 5 멍 S 멍 Ş В 5 ₽ δ 8 ঠ 8 S S 밁 뮵 ঠ 멍 Ś 3437 3197 3137 3677 3617 3557 3497 3377 3317 3257 541 481 421 361 301 241 121 61 \_ GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCC ATGGGCGCCCGCGCCAGCATCCTGCGCGGGGCAAGCTGGAACGCCTGGGAGCGCATCCGC GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGGCGCCACCCCCCAG GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCCATCGTGCAGAACCTGCAGGGCCAGATG ATCCGCCAGCTGCACCCCCGCCCTGCAGAACCGGCAGCGAGGAGGAGCTGAAGAGCCTGTTCAAC 240 CTGCGCCCCGGCGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGCGAG GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG CTGGACAAGATCGAGGAGGAGGAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC 300 ATCCGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGAGGCTGAAGAGCCTGTTCAAC CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC CTGCGCCCCGGCGCAAGAAGTGCTACATGAAGCACCTGGTGTGGGCCAGCCGCGAG GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGGCGCCACCCCCCAG 660 600 3676 540 3616 480 3556 420 3496 3436 3736 360 3376 3316 180 120 3196 3256 60

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RESULT 9
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            expression cassette; HIV Gag; Env; Int; Nef; p15RnaseH; Pol; Tat; Prot; Rev; HIV type C; gene therapy; vaccine; immunisation; HIV; ds.
                                           DNA of HIV construct gp160mod-TV1-gagmod-BW965 SEQ ID NO
                                                                18-DEC-2003
                                                                                    ADC13259;
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Query Match Best Local

Match 99.9%; Local Similarity 99.9%;

Score 1477.4; DB 9; Pred. No. 3.1e-185;

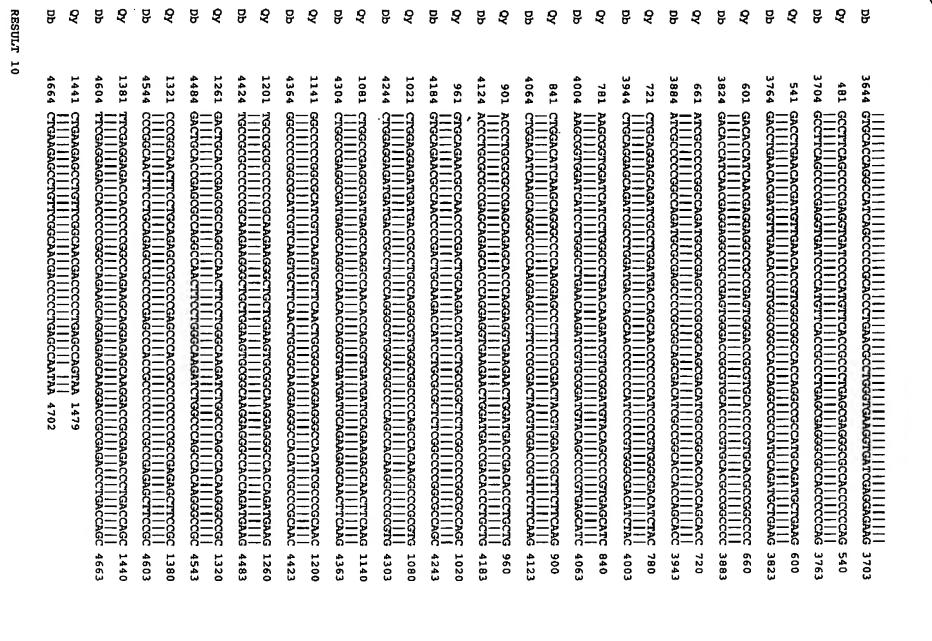
Length 4702;

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The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Int, Nef, pl5knaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy of used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intrarectally, orally or intravenously. The expression cassette is us for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an HType C related sequence of the invention.
                                                                                                                                                                                                                                         New expression cassette comprising a polynucleotide sequence encupolypeptide including an HIV Gag, Env, Int, Nef, pl5RnaseH, Pol, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUL-2001; 2001US-0303192P
31-AUG-2001; 2001US-0316860P
16-JAN-2002; 2002US-0349871P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-2002; 2002WO-US021420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human immunodeficiency virus.
Sequence 4702 BP; 1057 A; 1617 C; 1371 G; 657
                                                                                                                                                                                                              Disclosure; Fig 35; 301pp; English.
                                                                                                                                                                                                                                                                                                                        WPI; 2003-221593/21.
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(UYST-)
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UNIV STELLENBOSCH
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S S 밁 S 밁 S 묽 S 몽 S 밁 문 밁 Matches 1478; 3524 3464 3404 3284 3224 241 181 121 421 61 -ATGGGCGCCCGCGCCAGCATCCTGCGCGCGCCAAGCTGGAACGCCTGGGAAGCGCATCCGC CTGCGCCCCGGCGGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGCGAG GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGGCTGCAAGCAGATC GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG CTGGACAAGATCGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCCC ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCCAAGGAGGCC ATCCGCCAGCTGCACCCCCGCCAGAACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAAC CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC ATCCGCCAGCTGCACCCCCGCCCTGCAGACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAAC Conservative 0 Mismatches .1e-185; les 1; Indels 0; Gaps 480 420 360 300 3463 240 3403 3643 3583 3523 180 3343 120 3283 60 0

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127 181 61 67 121

CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGGCTGCAAGCAGATC

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CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATC

CTGCGCCCCGGCGGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCCAGCCGCGAG

ATCCGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGAGGAGGCTGAAGAGCCTGTTCAAC

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ACA03522
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Best Local S
Matches 1478
                                                                                                                                                                                                                                                                                                                         The invention describes a synthetic polynucleotide encoding 2 or more immunogenic HIV polypeptides, where at least 2 of the polypeptides are derived from different HIV subtypes. The polynucleotide is useful for immunisation, generation of packaging cell lines, or production of HIV polypeptides. The polynucleotide and its encoded proteins are useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, or for inducing neutralising antibodies against HIV. The gene delivery vector comprising the polynucleotide is also useful for DNA immunisation of, or for generating an immune response (e.g. a humoral or cellular immune response) in, a subject such as a mammal, particularly a human. This sequence encodes a human immunodeficiency virus immunogenic peptide
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31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349728P.
16-JAN-2002; 2002US-0349793P.
16-JAN-2002; 2002US-0349871P.
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                                                                                                                                                                                                                                                                        Sequence 4716 BP; 1041 A; 1684 C; 1463 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New synthetic polynucleotides encoding antigenic HIV type B and/or type C polypeptides, useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, especially humans.
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                                                                                                                                                1478; Conservative
                  ~
                                                                                                                                      h 99.9%; Score 1477.4; DB 7; Similarity 99.9%; Pred. No. 3.1e-185; 78; Conservative 0; Mismatches 1;
               ATGGGCGCCCGCGCCAGCATCCTGCGCGGGCAAGCTGGACGCCTGGGAGCGCATCCGC
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301 307	CTGGACAAGAT	
61	GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG 420	
421	GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG 480	
81	GCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCAG 540	
541 547	GACCTGAACACGATGTTGA	
	GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCC 660	
661	ATCGCCCCCGGCCAGATGCGCGAGCCCCCGCGGCAGCACCAGCACCAGCACC 720	
721 727	CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCATCCCCGTGGGCGACATCTAC 780	
781 787	AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC 840	
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901 907	ACCCTGCGCGCGAGCAGAGCACCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTG 960	
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Query Match Best Local Similarity Matches 1478; Conserva

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Score 1477.4; DB 9; Pred. No. 3.1e-185; 0; Mismatches 1;

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                                                 The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, En Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy or used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intrarectally, orally or intravenously. The expression cassette is usef for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an HIV Type C related sequence of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
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                                                                             GTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCGGCGCCCAGC
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        CTGAAGAGCCTGTTCGGCAACGACCCCCTGAGCCAGTAA
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ACA03524 standard; DNA; 2742

ACA03524;

22-MAY-2003 (first entry)

Synthetic DNA ecoding immunogenic VIΗ peptide **#7**.

Immunogenic HIV polypeptide; human immunodeficiency virus; HIV; vaccine; gene therapy; packaging cell line; humoral immune response; cellular immune response; gene delivery vector; DNA immunisation; ds.

16-JAN-2003

05-JUL-2002; 2002WO-US021421.

05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349728P.
16-JAN-2002; 2002US-0349793P.
16-JAN-2002; 2002US-0349871P.

(CHIR ) CHIRON CORP

ŗ Barnett Lian

2003-221602/21

New synthetic polynucleotides encoding antigenic HIV type B and/or type polypeptides, useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject especially humans. subject,

1; Fig 12; 262pp; English.

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CTGGCCGAGGCGATGAGCCAGGCCAACACCAGCGTGATGATGCAGAAGAGCAACTTCAAG

1146

RESULT 12
ACA03524
ACA03324
ACA03524
ACA03324
ACA0324
AC The invention describes a synthetic polynucleotide encoding 2 or more immunogenic HIV polypeptides, where at least 2 of the polypeptides are derived from different HIV subtypes. The polynucleotide is useful for immunisation, generation of packaging cell lines, or production of HIV polypeptides. The polynucleotide and its encoded proteins are useful a immunogenic compositions or vaccines for generating humoral or cellula r production of HIV oteins are useful as humoral or cellular

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16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                  expression cassette; HIV Gag;
Rev; HIV type C; gene therapy;
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expression cassette; HIV Gag; Env; Int; Nef; p15RnaseH; Pol; Tat; Prot; Rev; HIV type C; gene therapy; vaccine; immunisation; HIV; ds.
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05-JUL-2002; 2002WO-US021420

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Query Match 99.8%;
Best Local Similarity 99.9%;
Matches 1477; Conservative
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31-AUG-2001;
16-JAN-2002;
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31-AUG-2001;
16-JAN-2002;
                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Env. Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide. The novel expression cassette can be used to treat HIV type C by gene therapy or used in the development of a vaccine. The gene delivery vector is administered intramuscularly, intramucosally, intranasally, subcutaneously, intradermally, transdermally, intravaginally, intrarectally, orally or intravenously. The expression cassette is useful for immunisation, generating packaging cell lines and producing HIV polypeptides. This polynucleotide sequence represents the DNA of an HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating packaging cell lines.
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Search completed: May 28, 2004, 09:49:09 Job time: 689.39 secs **B** -

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Post-processing: Minimum Match 10%
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Pred. No. is the number of results predicted by chance to have a

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SUMMARIES

REFERENCE AUTHORS TITLE JOURNAL	SOURCE ORGANISM	ACCESSION VERSION	AX455887 LOCUS DEFINITION	- Н		45 111	- H	41 111 42 111	40 111		36 111 37 111	5 11	3 11	11	0 11 0 11	, <sub>11</sub> ,	360 111	5 A 11		11:	9 11	18 1197	וסו	14 120 15 119	12 122 13 1	) <u>i i i</u>	9 1275 10 1273	-	6 128 7 1	13	14	21	Result No. So
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/mol_type="unassigned DNA"
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Microparticles for delivery of the heterologous nucleic acids Patent: WO 0226209-A 67 04-APR-2002;
CHIRON CORPORATION (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human immunodeficiency virus 1 (HIV-1)
Human immunodeficiency virus 1
Viruses; Retroid viruses; Retroviridae;
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Sequence 67 from Patent WO0226209.
AX468547
AX468547.1 GI:21901377
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                                                                                             ATCCGCCAGCTGCACCCCGCCCTGCAGAACCGGCAGCGAGGAGGAGCTGAAGAGCCTGTTCAAC
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                                                                                                                                                                                                                                                                                                                                                         /organism="Human immunodeficiency virus
/mol_type="unassigned DNA"
/db_xref="taxon:11676"
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1380 1380	1321 CCCGGCAACTTCCTGCAGAGCCGCCCCGAGCCCACCGCCCCCCCC
1320 1320	.261 GACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGGCCGC 
1260 1260	1201 TGCCGCGCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCACCAGATGAAG
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1140 1140	1081 CTGGCCGAGGCGATGAGCCAGGCCAACACCAGCGTGATGATGCAGAAGAAGAGCAACTTCAAG
1080	021 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCGCCCAGCCACAAGGCCCGCGTG
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900	841 CTGGACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAG
840 840	TIGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC:
780 780	721 CTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCATCCCCGTGGGCGACATCTAC
720 720	661 ATCGCCCCGGCCAGATGCGCGAGCCCCGCGGCACCATCGCCGGCACCACCAGCACC
660	01 GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGCCCCCCCC
600	1 GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG
540 540	81 GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCAG
480 480	21 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG
420 420	361 GCCGACAAGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG
360	301 CTGGACAAGATCGAGGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC

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Sequence 20 from Patent
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AX455904.1 GI:21714896
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GACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAG
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AF110965"
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
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Pred. No. 2.2e-149;
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1 (bases 1 to 1485)
Gao,F., Li,Y., Decker,J.M., Peyerl,F.W., Bibollet-Ruche,F., Rodenburg,C.M., Chen,Y., Shaw,D.R., Allen,S., Musonda,R., Shaw,G.M., Zajac,A.J., Letvin,N. and Hahn,B.H.
Codon usage optimization of HIV type 1 subtype C gag, pol, nef genes: in vitro expression and immune responses in
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Gao, F., Li, Y., Decker, J.M., Bibollet-Ruche, F., Rodenburg, C.M., Chen, Y., Shaw, D.R., Allen, S., Musonda, R., Shaw, G.M., Zajac, A.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (16-NOV-2002) Medicine, I
112 RPIII, LaSalle Street, Durham,
Location/Qualifiers
1, .1485
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GCCGCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAG
                                           CTGGACAAGATCGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAG---GCCGAG
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                                                                                                                   ACCGTGGCCACCCTGTACTGCGTGCACGAGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC
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/mol_type="genomic DNA"
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Pred. No. 8e-135;
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GCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGGCGCCACCCCCAG
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="Gag_TV2_C_ZAopt"
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nilarity 92.9%;
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="HIV Type C Gag optimized"
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Query Match Best Local Similarity 92.5%; Pred. No. 2.9e-129; Best Local Similarity 92.5%; Pred. No. 2.9e-129; Matches 1399; Conservative 0; Mismatches 77; Indels 36; Gaps Matches 1399; ATGGGCCCGCCCAGCATCCTGCGCGCGCGAAGCTGGACGCCTGGGAGAGCCATCCGC 60  Oy  ATGGGCCCCGCCCCAGCATCCTGCGCGCGAGAAGCTGGACAAGTGGGAGAAGATCCGC 60  1 ATGGGCCCCGCGCCCAGCATCCTGCGCGCGAGAAGCTGGACAAGTGGGAGAAGATCCGC 60	JOURNAL Patent: WO 0204493-A 4 17-JAN-2002;  CHIRON CORPORATION (US); University of Stellenbosch (ZA)  PEATURES  Location/Qualifiers  source  11509  /organism="synthetic construct" /mol_type="unassigned DNA" /db_xref="taxon:32630" /note="synthetic Gag of HIV strain AF110967"  ORIGIN	3	RESULT 8 AX455888 AX455888 LOCUS AX455888 DEPINITION Sequence 4 from Patent WO0204493. ACCESSION AX455888 VERSION AX455888.1 GI:21714881	QY 1420 GACCGCGAGACCCTGACCAGCCTGAAGAGCCTGTTCGGCAACGACCCCCTGAGCCAGTAA 1479	QY 1360 CCCCCCGCCGAGAGCCTTCCGCTTCGAGGAGACCACCCCCGGCCAGAAGCAGGAGAGCAAG 1419	OY         1321         CCCGGCAACTTCCTGCAGAGCCGCC	OY 1261 GACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGCCCAGCCACAAGGGCCGC 1320	OY 1201 TGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCCACCAGATGAAG 1260	QY 1141 GGCCCCCGGCGCATCGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACATCGCCCGCAAC 1200	OY 1081 CTGGCCGAGGCGATGAGCCAGGCCAACACCAGCGTGATGATGCAGAAGAGCAACTTCAAG 1140	OY 1021 CTGGAGGAGATGATGACCGCCTGCCAGGCGTGGGGGGGGCCCAGACGAAGGCCCGCGTG 1080	QY 961 GTGCAGAACCCCGACTGCAAGACCATCCTGCGCGCGCTCTCGGCCCCGGCGCCAGC 1020	QY 901 ACCCTGOGCGCGAGCAGAGCACCCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTG 960
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1021 CTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGCCCCACAAGGCCCACCACGCGTG 1080	1 ACCCTGCGCGCGAGCAGAGCACCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTG	781 AAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTGAGCATC 840	661 ATCGCCCCGGCCAGATGCGCGAGCCCCGCGGCAGCATCGCCGGCACCAGCACCAGCACCAGCACCAGCAGCACCAGCAG	601 GACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCC 660	541 GACCTGAACACGATGTTGAACACCGTGGGCCGCCAGGCCGCCATGCAGATGCTGAAG 600	481 GCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGGCGCCACCCCCAG 540	421 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG 480	361 GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGAATG 420	301 CTGGACAAGATCGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC 360	241 ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC 300	181 ATCCGCCAGCTGCAGCCCGGCCTGCAGACCGGCAGCGAGGAGCCTGAAGAGCCTGTTCAAC 240	121 CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGAATC 180	61 CTGCGCCCCGGCGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGCGAG 120

Query Match  B6.2%; Score 1275.2; DB 6; Length 1509;  Best Local Similarity 92.5%; Pred. No. 4.3e-129;  Matches 1398; Conservative 0; Mismatches 78; Indels 36; Gaps 4;  Qy  1 ATGGGCGCCCGGCCCAGCATCCTGCGCGGCGCAAGCTGGAAGCCTGGAAGCCATCCGC 60	virus es; Ret Donnell Dubens ivery o 1 04-Ap ifiers ifiers assigne ssigne on:1167	468 CTGAGCCAGTAA 1479              498 CTGAGCCAGTAA 1509  498 CTGAGCCAGTAA 1509  AX468544  AX468544  AX468544.1 GI:21901374  AX468544.1 GI:21901374	Db 1138 AAGGGCCCCGGCGCAAGAAGGTCAAGTGCTTCAACTGCGGCAAGGAGGGCCACAAGAGT 1257  Qy 1198 AACTGCCGCGCCCCCCGGCAAGAAGGGGCTGCTTGAACTGCGGCAAGGAGGGCCACCAAGT 1257  Db 1198 AACTGCCGCGCCCCCCGGCAAGAAGGGGCTGCTTGAAGTGCGGCAAGGAGGGCCACCAGATG 1257  Qy 1258 AAGGACTGCACCGAGGGCCAAGAAGGAGGCAAGATG 1257  Db 1258 AAGGACTGCACCGAGGGCCAAGAAGAGGCCAAGTTCCTTGGGCAAGAGTTCTTGGCCCAGCCACAAGGGC 1317  Qy 1318 CGCCCCGGCAACTTCCTTGCAGAGGCCAACTTTCCTTGGGCAAGATCTTGGCCCAGCCCACCAGGC 1317  Db 1318 CGCCCCGGCAACTTCCTTGCAGAGGCCGAGCCCACCAGCC 1359
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QY 421 GTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAG	QY 361 GCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATG	QY 301 CTGGACAAGATCGAGGAGGAGGAGCAGAACAAGTGCCAGCAGAAGATCCAGCAGGCCGAGGCC	QY 241 ACCGTGGCCACCCTGTACTGCGTGCACGAGAAGATCGAGGTCCGCGACACCAAGGAGGCC	Qy 181 ATCCGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAAC	OY 121 CTGGAGAAGTTCGCCCTGAACCCCGGCCTGCTGGAGACCAGCGAGGGCAGGCA	QY 61 CTGCGCCCCGGCGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCAGCCGCGAG	QY 1 ATGGGCGCCCAGCCAGCATCCTGCGCGGCGAAGCTGGACGCCTGGGAGCGCCATCCGC	Query Match 86.1%; Score 1273.6; DB 6; Length 1509; Best Local Similarity 91.8%; Pred. No. 6.4e-129; Matches 1388; Conservative 12; Mismatches 76; Indels 36; Gaps	/organism="Human immunodeficiency virus 1" /mol_type="unassigned DNA" /db_xref="taxon:11676"  ORIGIN	AL Patent: WO 0226209-A 68 04-APR-2002; CHIRON CORPORATION (US) S Location/Qualifiers urce 11509	REPERENCE 1  AUTHORS O'Hagan, D., Otten, G., Donnelly, J.J., Polo, J.M., Barnett, S.,  Singh, M., Ulmer, J. and Dubensky, T.W.  Singh, M., Ulmer, J. and Dubensky, T.W.  Microparticles for delivery of the heterologous nucleic acids	SOURCE Human immunodeficiency virus 1 (HIV-1)  SOURCE Human immunodeficiency virus 1  ORGANISM Human immunodeficiency virus 1  Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate	DEFINITION Sequence 68 from Patent WO0226209.  ACCESSION AX468548 VERSION AX468548.1 GI:21901378	T 10	Qy 1468 CTGAGCCAGTAA 1479            Db 1498 CTGAGCCAGTAA 1509	QY 1420 GACCGCGAGACCCTGACCAGCCTGAAGAGCCTGTTCGGCAACGACCCCCDD	QY 1360 CCCCCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGGCCAGAAGCAGGAGAGCAAG	Db 1318 CGCCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCC
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Patent: WO 0204493-A 21 17-JAN-2002;
CHIRON CORPORATION (US); University of Stellenbosch (ZA)
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                            GACCGCGAGCCCTACCGCGAGCCCCTGACCGCCCTGCCGCAGCCTGTTCGGCAGCGGCCCC
                                                         CTGGCCGAGGCCATGAGCCAGGCCAACACC---AGCGTGATGATGCAGAAGAGCAACTTC: 1137
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                                      -ACCGCGAGACCCTGACCAGCCTGAAGAGACCCTGTTCGGCAACGACCCC
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Modifications of hiv env, gag, and po
genetic immunization
Patent: WO 0232943-A 168 25-APR-2002;
GOVERNMENT OF THE UNITED STATES (US)
Location/Qualifiers
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/mol_type="unassigned DNA"
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Sequence 17:
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AX427936.1
                                                                                                         genetic immunization
Patent: WO 0232943-A 174 25-APR-2002;
GOVERNMENT OF THE UNITED STATES (US)
Location/Qualifiers
                                                                                                                                                     Modifications of hiv env,
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                                                                                                                                                                                        artificial sequences
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           81.5%;
90.0%;
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  Score 1206; DB 6;
Pred. No. 7.5e-122;
0; Mismatches 130;
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                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus
Human immunodeficiency virus
Viruses; Retroid viruses; Retroviridae;
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Sequence 2 from Patent 1
AX149648
AX149648.1 GI:14348047
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                                                                                                                                             GAGACCCTGACCAGCCTGAAGAGCCTGTTCGGCAACGACCCCCTGAGCCAGTAA 1479
ATGAAGCAGCTGCAGAGCGCCCTGCAGGACCGGCACCGAGGAGCTGAGGAGCCTGTTCAAC
          ATCCGCCAGCTGCACCCCCGCCCTGCAGAACCGGCAGCGAGGAGGCTGAAGAGCCTGTTCAAC
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                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                       /organism="Human immunodeficiency
/mol_type="unassigned DNA"
/db_xref="taxon:12721"
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89.5%;
                                                                                                                                                                                               Score 1205.4; DB 6;
Pred. No. 1.1e-121;
0; Mismatches 141;
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TGCCGCGCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGGCCACCAGATGAAG
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1 (bases 1 to 1509)

2 ur Megede, J., Chen, M.C., Doe, B., Schaefer, M., Greer, C.E., Selby, M., Otten, G.R. and Barnett, S.W.

Increased expression and immunogenicity of sequence-modifinemunodeficiency virus type 1 gag gene

J. Virol. 74 (6), 2628-2635 (2000)
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Synthetic construct gag
AF201927
AF201927.1 GI:7248702
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                                                                        CTGCGCCCCGGCGGCAAGAAGAAGTACAAGCTGAAGCACATCGTGTGGGCCAGCCGAG
                                                                                         CTGCGCCCCGGCGGCAAGAAGTGCTACATGATGAAGCACCTGGTGTGGGCCCAGCCGCGAG
                                                                                                                                                           ATGGGCGCCCGCGCAGCATCCTGCGCGGGGCAAGCTGGAACGCCTGGGAGCGCATCCGC
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                                                                                                                                                                                                                Conservative
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VEKKAFSPEVIPMFSALSEGATPQDLNTMLNTVGGHQAAMQMLKBTINEEAAEWDRVH
PVHAGPIAPGQMREPRGSDIAGTTSTLQEQIGWMTNNPPIPVGEIYKRWIILGLNKIV
RMYSPTSILDIRQGPKEPFRDYVDRFYKTLRAEQASQDVKNWMTETLLVQNANPDCKT
ILKALGPAATLEEMMTACQGVGGPGHKARVLAEAMSQVTNPATIMMQRGNFRNQRKTV
KCFNCGKEGHTARNCRAPRKKGCWRCGREGHOMKDCTERQANFLGKIWPSYKGRPGNF
KCFNCGKEGHTARNCRAPRKKGCWRCGREGHOMKDCTERQANFLGKIWPSYKGRPGNF
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Location/Qualifiers
1. .1509
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
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Pred. No. 9.9e-121;
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GATCGCCAGC	GAGATCTACAAGCGGTGG GTGAGCATCCTGGACATC            ACCAGCATCCTGGACATC TTCTTCAAGACCCTGCGG               TTCTACAAGACCCTGCGG	CATCTA	AGGAGAAGGC	GCCAGCTGCACCCCGCCTG
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CCTGGAGGAGATGATGACC	ATCATO	CGGCCAG	CCCGAC CCCGAC CCCGATA ACGATA ACGATA AACGACA	CTGCAC CTGCAC CTGCAC CTGCAC CTGCAC CAGAAA CAGCCAC CAGAAA CAGCCAC CAGAAA CAGCCAC CAGAAA CAGCCAC CAGAAA CAGCCAC CAGAAA CAGCCAC CAGAAA
CCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCC	CGAGATCTACAAGCGGTGGATCATCCTGGGCCTGAACAA CGTGAGCATCCTGGACATCAAGCAGGGCCCCAAGGAGCC	GCCAGATGCGCGAGCC	AAGGCCTTCAGCCCCGAGGTGATCC	GCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGAGCTGAAGAGCCTGTTCAAC
CCGCCTGCCAGGGCGTGGGCGGCCCAGCCAC	CTGCA	CGATGA GATGA GATGA		CAGGA
CTGCCAGGGCGTGGGCGG	ACAAGA AGCCCI AGCCCI AGGACCA AGACCA AGACCA	GAGCCCCGCGGCAGCGA	CCATGITCACC	NGGAGG NG
GCTGG	AGATCGTGCGA CTTCCGCGAA CTTCCGCGAA CCTTCCGCGAA CCTTCCGCGAA CCGTGAAGAAA ACGTGAAGAAA CCATCCTGCGG CCATCCTGAAA	GCAGG		GCCCATCGTGC
GGCCCI       	CGGATI         AACTIG        AACTIG        AACTIG		CCGCGTGAGC	AGCCTM AGCTM AGCCTM AGCTM AGCCTM AGCCTM AGCCTM AGCCTM AGCCTM AGCCTM AGCCTM AGCCTM AGCT
CAGCCAC			COGCCCTGAGCGAGGGC	GCTGTTCAAC             GCTGTTCAAC              GCTAGGAGGCC              GCAGGAGGAGCC
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Search completed: May 28, 2004, 13:23:24 Job time : 6085.87 secs

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Result
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1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*

2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*

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US-09-475-515-76
US-09-475-515-76
US-09-475-515-74
US-09-475-515-73
US-09-552-950-5
US-09-184-418C-100
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US-09-184-418C-11
US-09-184-418C-11
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Sequence 9, Application US/094755;
Patent No. 6602705
GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
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US-08-050-478-129
US-09-414-117-129
US-09-414-117-129
US-09-678-437-129
US-09-678-437-129
US-09-678-437-129
US-08-418-848A-9
US-09-872-733A-6
US-08-188-5518-1
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#### APPLICANT: EXEMPTY, Susan APPLICANT: EXIVASTAVA, Indresh APPLICANT: SRIVASTAVA, Indresh APPLICANT: LIAN, Ying APPLICANT: LIAN, Ying APPLICANT: LIU, Hong APPLICANT: LIU, Hong APPLICANT: GREER, Catherine APPLICANT: WALKER, Christopher TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUC TITLE OF INVENTION: OF VIRUS-LIXE PARTICLES FILE REFERENCE: 1621.002 CURRENT FILING DATE: 1999-12-30 NUMBER OF SEQ ID NOS: 90 SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 20 LENGTH: 60 TYPE: DNA ORGANISM: Artificial Sequence FEATURE: OTHER INFORMATION: Description of Artificial Sequence: synthetic p55 OTHER INFORMATION: Gag Major Homology Region US-09-475-515-20 RESULT 1 US-09-475-515-20 Sequence 20, Applicate Patent No. 6602705 GENERAL INFORMATION: Query Match Best Local & Matches 20, Application 5. 6602705 . Similarity 59; Conserv Conservative 97.3**%**; 98.3**%**; US/09475515A Score 58.4; DB 4; Pred. No. 2.7e-10; Mismatches Length Indels AND PRODUCTION 0 Gaps 60 60

9, Application US/09475515A 5, 6602705

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RESULT 4
US-09-475-515-5
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; ORGANISM: Artificial Sequence
; PEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: HIV-Gag
US-09-475-515-4
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                Sequence 5, Application US/09475515A Patent No. 6602705 GENERAL INFORMATION:
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Matches 59
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT PILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOPTWARE: Patentin Ver. 2.0
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APPLICANT: SELBY, Mark
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OP VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: BARNETT, SUSAN
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
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59; Conserv
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6602705
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Pred. No. 3.
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; OTHER INFORMATION: Description of Artificial Sequence: GP1
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CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOPTWARE: Patentin Ver. 2.0
SEQ ID NO 78
LENGTH: 1865
TYPE: DNA
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APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: LIU, Hong
APPLICANT: GREBR, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: LIAN, Ying APPLICANT: HARTOG, Karin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 1853
TYPB: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Description of Artificial Sequence: synthetic OTHER INFORMATION: HIV-Gag-protease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                             Local
868 GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC
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                                               1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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                                                                                                             Similarity
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6602705
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                                                                                        Conservative
                                                                                                           97.3%; Score 58.4; DB 4; 98.3%; Pred. No. 3.7e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97.3%; Score 58.4; DB 4; 98.3%; Pred. No. 3.7e-10;
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                                                                                      Mismatches
                                                                                                                                Length 1865;
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                                                                                        Indels
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RESULT 6 US-09-475-515-79

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APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 79
LENGTH: 1865
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: GP2
US-09-475-515-79
                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SEQ ID NO 7
LENGTH: 2011
9
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US-09-475-515-7
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                                                                                                                                       Query Match
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APPLICANT: CREER, Catherine
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
                                                                                                                                                                                                      ORGANISM: Artificial Sequence FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: synthetic OTHER INFORMATION: HIV-Gag/HCV-core fusion polypeptide
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APPLICANT: HARTOG, Karin
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Local Similarity 98.3%;
les 59; Conservation
                                                                                                              Local Similarity
 862
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5. 6602705
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GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 921
                                             GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
                                                                                          Conservative
                                                                                      97.3%; Score 58.4; DB 4; Length 2031; 98.3%; Pred. No. 3.7e-10; 2ive 0; Mismatches 1; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 58.4; DB 4;
Pred. No. 3.7e-10;
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; OTHER INFORMATION: Description of Artificial Sequence: synthetic; OTHER INFORMATION: HIV-Gag-polymerase US-09-475-515-6
                                                              ; OTHER INFORMATION: Description of Artificial Sequence: ; OTHER INFORMATION: gp160.modUS4.delV1/V2.gag.modSF2 US-09-475-515-75
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GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: STIVA VICE
APPLICANT: TIAN VICE
                                                                                                                                                                                                              SOFTWARE: P
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Best Local Similarity
Query Match
Best Local Similarity
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                                                                                                                                                                                                                                           APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
NUMBER OF SEQ ID NOS: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: LIU, Hong
APPLICANT: LIU, Hong
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
APPLICANT:
                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence FRATURE:
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ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                        ENGTH: 4472
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5. 6602705
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                                                                                                                                                                                                                             PatentIn Ver. 2.0
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ZUR MEGEDE, Jan
SRIVASTAVA, Indresh
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)G, Karin
 97.3%;
98.3%;
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98.3%;
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Score 58.4; DB 4; Length 4472; Pred. No. 4e-10;
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT PILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description
; OTHER INFORMATION: gpl60.modS!
US-09-475-515-76
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Best Local Similarity
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APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
FILE REPERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: BARNETT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: LIAN, Ying
OTHER INFORMATION: Description of Artificial Sequence:
                                       TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH: 4608
                                                                               ENGTH: 4689
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6602705
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98.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 58.4; DB 4; Length 4608; Pred. No. 4e-10; 0; Mismatches 1; Indels 0
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RESULT 13
US-09-552-950-2
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US-09-475-515-73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: gp160.modUS4.gag.modSF2
US-09-475-515-73
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Best Local S
Matches 59
                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/552,950
CURRENT FILING DATE: 2000-04-20
NUMBER OF SEQ ID NOS: 22
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
                                                                                                                                                                                                                                                                                        Sequence 2, Application US/09552950
Patent No. 6541248
GENERAL INFORMATION:
APPLICANT: Oxford Biomedica (UK) Limited
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Ver. 2.0 SEQ ID NO 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
 Query Match
                                                                                                                                                                                                                                                            TITLE OF INVENTION: Anti-Viral Vectors FILE REFERENCE: 674524-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/475,515A CURRENT FILING DATE: 1999-12-30 NUMBER OF SEQ ID NOS: 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
                                        FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:gagpol-SYNgp - codon
OTHER INFORMATION: optimised gagpol sequence
                                                                                                LENGTH: 4307
TYPB: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 4766
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: Artificial Sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
les 59; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4011 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 4070
                                                                                                                                                                                                                                                                                                                                                                                                                                                 4088 GACATECGECAGGGECECAAGGAGECETTECGEGACTAEGTGGACCGETTETACAAGACE 4147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LIU, Hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HARTOG, Karin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LIAN, Ying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZUR MEGEDE, Jan
SRIVASTAVA, Indresh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/09475515A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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98.3%;
   79.78;
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Pred. No. 4e-1
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 58.4; DB 4;
Pred. No. 4e-10;
0; Mismatches 1;
Score 47.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4; DB 4
4e-10;
   DB 4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 4766;
 Length 4307;
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CURRENT APPLICATION NUMBER: US/09/552,950
CURRENT FILING DATE: 2000-04-20
NUMBER OF SEQ ID NOS: 22
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 5
LENGTH: 9772
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                              ; TYPE: DNA; ORGANISM: Human immunodeficiency virus type 1; FEATURE:
; OTHER INFORMATION: isolate=94IN476.104; gene=gag
US-09-184-418C-100
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US-09-184-418C-100
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US-09-552-950-5
; Sequence 5, Application US/09552950
; Patent No. 6541248
; GENERAL INFORMATION:
; APPLICANT: Oxford Biomedica (UK) Limited
; TITLE OF INVENTION: Anti-Viral Vectors
; FILE REFERENCE: 674524-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                    Sequence 100, Application US/09184418C

Sequence 100, Application US/09184418C

Patent No. 6492110

GENERAL INFORMATION:
APPLICANT: Habn, Beatrice
APPLICANT: Gao, Feng
APPLICANT: Shaw, George
TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
TITLE OF INVENTION: IMMUNODEFICIENCY VIRUS TYPE 1

FILE REFERENCE: D6287
CURRENT APPLICATION NUMBER: US/09/184,418C
CURRENT FILING DATE: 1999-11-02

NUMBER OF SEQ ID NOS: 112

SEQ ID NO 100
LENGTH: 1476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 88.1%; Pred. No. 9.9e-07; Matches 52; Conservative 0; Mismatches 7;
                                                                                     Query Match 58.3
Best Local Similarity 74.6
Matches 44; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 79.7%; Score 47.8; DB 4; Length 9772; Best Local Similarity 88.1%; Pred. No. 1.1e-06; Matches 52; Conservative 0; Mismatches 7; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          850 GACATCCGCCAAGGCCCCGAAGGAACCCTTTCGCGACTACGTGGACCGGTTCTACAAAAC 908
 841 GÁCATAAGACAAGGGCCAAI
                                              1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGAC 59
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                                                                                   58.3%; Score 35; DB 4; Length 1476; 74.6%; Pred. No. 0.011; tive 0; Mismatches 15; Indels
 AGGAACCCTTTAGAGACTATGTAGACCGGTTCTTTAAAAC 899
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Search completed: May 28, 2004, 13:26:22 Job time : 6.49156 secs

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Minimum DB seg length: 0
Maximum DB seg length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
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                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  May 28, 2004, 11:33:50; Search time 30.7692 Seconds (without alignments) 8870.358 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-475-704A-2
60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 1.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Published Applications NA:*
/cgn2_6/ptodata/1/pubpna
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Listing first 45 summaries
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Copyright (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/1/pubpna/US08_NEW_PUB.seq:*
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6/ptodata/1/pubpna/PCTUS_PUBCOMB.seq:*
                                                                                                    SUMMARIES
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13 US-10-387-336-75 Sequence 75 13 US-10-387-336-75 Sequence 75 13 US-10-387-336-74 Sequence 76 13 US-10-387-336-74 Sequence 74 13 US-10-387-336-73 Sequence 73 15 US-10-241-009-16 Sequence 16 15 US-10-241-009-55 Sequence 55 15 US-10-190-4348-16 Sequence 55 15 US-10-190-4348-55 Sequence 55
15 US-10-190-305A-11 15 US-10-190-305A-11 15 US-10-241-009-17 15 US-10-241-009-17 15 US-10-241-009-15 15 US-10-241-009-15 15 US-10-241-009-13 15 US-10-241-009-14 15 US-10-190-434B-13 15 US-10-241-009-14 15 US-10-190-434B-14 15 US-10-190-434B-14 16 US-10-190-434B-14 17 US-10-190-434B-19 18 US-10-241-009-10 19 US-10-190-434B-10 19 US-10-190-434B-10 19 US-10-190-434B-11 19 US-10-387-336-75 10 US-10-387-336-76 10 US-10-387-336-76 11 US-10-387-336-76 12 US-10-241-009-16 15 US-10-190-434B-16 15 US-10-387-336-76 16 US-10-387-336-76 17 US-10-387-336-76 18 US-10-387-336-73 18 US-10-341-009-16 19 US-10-241-009-55 19 US-10-241-009-55 19 US-10-241-009-55 19 US-10-241-009-55 19 US-10-241-009-55 19 US-10-241-009-55 19 US-10-190-434B-16 19 US-10-190-434B-16 19 US-10-190-434B-16 19 US-10-190-434B-55 19 US-10-190-434B-55 19 US-10-190-434B-55
-10-190-434B-53 -10-190-305A-71 -10-190-305A-74 -10-241-009-17 -10-241-009-15 -10-241-009-15 -10-241-009-13 -10-241-009-14 -10-190-434B-15 -10-241-009-14 -10-190-434B-14 -10-190-434B-14 -10-241-009-10 -10-241-009-10 -10-241-009-10 -10-241-009-10 -10-241-009-10 -10-241-009-10 -10-241-009-10 -10-387-336-76 -10-387-336-74 -10-387-336-74 -10-241-009-16 -10-241-009-16 -10-241-009-16 -10-241-009-16 -10-387-336-74 -10-387-336-74 -10-387-336-74 -10-387-336-74 -10-387-336-75 -10-241-009-16
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## ALIGNMENTS

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Requence 2, Application US/09899575

Requence 2, Application US/09899575

Requence 2, Application US/09899575

Requence 2, Application US20030223961A1

General Information:

Applicant: Zur Megede, Jan

Applicant: Egnelbrecht, Susan W.

Applicant: Egnelbrecht, Susan

Applicant: Van Rensburg, Estrelita Janse

Applicant: Van Rensburg, Estrelita Janse

Applicant: Van Rensburg, Estrelita Janse

TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C

TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF

FILE REFERENCE: POL631.102

CURRENT APPLICATION NUMBER: US/09/899,575

CURRENT FILING DATE: 2001-07-05

PRIOR APPLICATION NUMBER: 09/475,704

PRIOR FILING DATE: 1999-12-30

NUMBER OF SEQ ID NOS: 135

SOFTWARE: Patentin Ver. 2.0
RESULT 2
US-09-967-464-64
; Sequence 64, Application US/09967464
; Publication No. US20030138453A1
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US-09-899-575-2
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                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 60
                                                                                                                                                                                                                                                                                                                                                                          SEQ ID NO 2
LENGTH: 60
TYPE: DNA
ORGANISM: Human immunodeficiency virus
                                                                                                                                                 60;
                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                 100.0%; Score 60; DB 13; llarity 100.0%; Pred. No. 2.2e-11; Conservative 0; Mismatches 0;
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Result No.

Length

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Description

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1509 1608 1914 1914 2493 4350 60 1268 1515

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US-09-899-575-2
US-09-967-464-68
US-09-967-464-68
US-09-899-575-21
US-09-899-575-21
US-10-168-843A-27
US-10-168-843A-31
US-10-168-843A-31
US-10-368-843A-31
US-10-387-336-9
US-10-387-336-9
US-10-387-336-7

Sequence 2, Appli Sequence 64, Appl Sequence 68, Appli Sequence 4, Appli Sequence 27, Appl Sequence 27, Appl Sequence 29, Appl Sequence 31, Appl Sequence 33, Appl Sequence 20, Appl

Sequence Sequence

Appl Appl

US-09-899-575-4

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LENGTH: 1509
TYPE: DNA
                                                                                                                                                                                                              SOFTWARE: PatentIn version 3.1
SEQ ID NO 68
LENGTH: 1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 68, Application US/09967464 Publication No. US20030138453A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                  APPLICANT: Dubensky, Jr., Thomas W.

TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS FILE REFERENCE: PP16269.004

CURRENT APPLICATION NUMBER: US/09/967,464

CURRENT FILING DATE: 2002-04-11

PRIOR APPLICATION NUMBER: 60/236,105

PRIOR FILING DATE: 2000-09-28

PRIOR APPLICATION NUMBER: 60/315,905

PRIOR PILING DATE: 2001-08-30

NUMBER OF SEQ ID NOS: 68
                                                                                                                  Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: O'Hagan, Derek
APPLICANT: Otten, Gillis
APPLICANT: Donnelly, John J.
APPLICANT: Polo, John M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/236,105
PRIOR FILING DATE: 2000-09-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
APPLICANT: Dubensky, Jr., Thomas W.
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS
FILE REPERENCE: PP16269.004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/315,905
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 68
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CURRENT FILING DATE: 2002-04-11
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                                                                                                                                                                         ORGANISM: Human immunodeficiency virus type 1
                                                                                                                                                                                              TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Human immunodeficiency virus type 1
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                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841 GACATCOGCCAGGGCCCCAAGGAGCCCTTCOGCGACTACGTGGACCGCTTCTTCAAGACC 900
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                                 1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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Ulmer, Jeffrey
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                                                                           Conservative
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                                                                                        100.0%;
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                                                                          Score 60; DB 10;
Pred. No. 1.9e-11;
; Mismatches 0;
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FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag
OTHER INFORMATION: coding sequence of HIV strain AF110967
US-09-899-575-21
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US-09-899-575-21
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Publication No. US20030223961A1
GENERAL INFORMATION:
                                                                                                                  Query Match
Best Local Similarity
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CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan
APPLICANT: Egnelbrecht, Susan
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
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NUMBER OF SEQ ID NOS: 135
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APPLICANT: Egnelbrecht, Susan
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
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CURRENT FILING DATE: 2001-07-05
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: DNA ORGANISM: Artificial Sequence FEATURE:
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APPLICANT: Barnett, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: of HIV strain AP110967
                                                                                                                                                                                                                                                                                                                   TYPE: DNA
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841 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACCTACGTGGACCGCTTCTTCAAGACC 900
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                                             1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                 60;
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                                                                                                 Conservative
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                                                                                           100.0%; Score 60; DB 13; Length 1509; 100.0%; Pred. No. 1.9e-11; tive 0; Mismatches 0; Indels 0
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RESULT 4

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US-10-168-843A-31
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US-10-168-843A-29
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                                                                                                                                 Sequence 31, Application US/10168843A Publication No. US20030108562A1 GENERAL INFORMATION:
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SOPTWARE: PatentIn Ver. 3
SEQ ID NO 29
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SOPTWARE: Patentin Ver. 2.1
SEQ ID NO 27
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APPLICANT: International Aids Vaccine Initiative
APPLICANT: University of Nairobi
TITLE OF INVENTION: Improvements in or Relating to Immune Responses to HIV
FILE REFERENCE: MJL/C1248'1/M
CURRENT APPLICATION NUMBER: US/10/168,843A
CURRENT FILING DATE: 2002-09-24
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                                                                  APPLICANT: Medical Research Council
APPLICANT: International Aids Vaccine Initiative
APPLICANT: University of Nairobi
                    APPLICANT: International Aids Vaccine Initiative APPLICANT: University of Nairobi TITLE OF INVENTION: Improvements in or Relating to FILE REFERENCE: MJL/C1248'1/M
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CURRENT APPLICATION NUMBER: US/10/168,843A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Artificial Sequence PEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
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ilarity 100.0%;
Conservative (
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Pred. No. 1.9e-11;
); Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1914;
                                             Immune Responses to
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RESULT 9
US-10-168-843A-33
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                                                                                                                                                                                                                                                                 Sequence 20, Ap
Publication No.
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                                                                                                                                                                 APPLICANT:
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CURRENT APPLICATION NUMBER: US/10/387,336
CURRENT FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US/09/475,515A
                                                APPLICANT: WALKER, Christopher TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES FILE REFERENCE: 1621.002
                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/168,843A CURRENT FILING DATE: 2002-09-24 NUMBER OF SEQ ID NOS: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: International Aids Vaccine Initiative APPLICANT: University of Nairobi TITLE OF INVENTION: Improvements in or Relating to FILE REFERENCE: MJL/C1248'1/M
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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TYPB: DNA
ORGANISM: Artificial Sequence
FEATURE:
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Local Similarity 100.0%;
les 60; Conservative (
                                                                                                                                                                                                                                                                                                                                                                       466 GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGAC
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                                                                                                                                                                                                                                      BARNETT,
                                                                                                                                                                                               ZUR MEGEDE, Jan
SRIVASTAVA, Indresh
                                                                                                                GREER, Catherine
SELBY, Mark
                                                                                                                                                  LIU, Hong
                                                                                                                                                                                                                                                                    Application US/10387336
                                                                                                                                                                     HARTOG,
                                                                                                                                                                                    LIAN,
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                                                                                                                                                                                Party
                                                                                                                                                                                                                                   Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description of Artificial Sequence: Chimeric polynucleotide
                                                                                                                                                                    Karin
                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 60; DB 15; 100.0%; Pred. No. 1.8e-11;
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Pred. No. 1.9e-11;
D: Mismatches 0;
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                                                                                  POLYPEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 4350;
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; OTHER INFORMATION: Description of Artificial Sequence: synthetic; OTHER INFORMATION: Gag Major Homology Region US-10-387-336-20
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                                                                                                                                           US-10-387-336-4
                                                                                    Sequence 4, Application US/10387336 Publication No. US20030223964A1 GENERAL INFORMATION:
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 APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/10/387,336
CURRENT FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US/09/475,515A
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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APPLICANT:
APPLICANT:
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NUMBER OF SEQ ID NOS: 90
SOPTWARE: Patentin Ver. 2.0
                              APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
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APPLICANT: ZUR MEGI
                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 1268
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
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LENGTH: 60
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag
OTHER INFORMATION: common region
                                                                                                                                                                                                                                                                                                      Local
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SRIVASTAVA, Indresh
LIAN, Ying
               LIAN, Ying
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SELBY, Mark
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LIU, Hong
HARTOG, Karin
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98.3%;
                                                                                                                                                                                                                                                                                                     97.3%; Score 58.4; DB 13 98.3%; Pred. No. 6.8e-11;
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Pred. No. 7.
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.7e-11;
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SEQ ID NO 4
LENGTH: 1515
                                                                                                                                                                                                                                                                             SEQ ID NO 5
LENGTH: 1853
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APPLICANT:
APPLICANT:
                                                                                                                 Query Match
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TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/10/387,336
CURRENT FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US/09/475,515A
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: WALKER, Christopher TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES FILE REFERENCE: 1621.002 FILE REFERENCE: 1621.002 CURRENT APPLICATION NUMBER: US/10/387,336 CURRENT FILING DATE: 2003-03-11 PRIOR APPLICATION NUMBER: US/09/475,515A PRIOR APPLICATION NUMBER: US/09/475,515A PRIOR FILING DATE: 1999-12-30
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                                                                                                                                                                          OTHER INFORMATION: Description of Artificial Sequence: synthetic OTHER INFORMATION: HIV-Gag-protease
                                                                                                                                                                                                                   TYPB: DNA
ORGANISM: Artificial Sequence
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                 FEATURE:
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                                                                                               Local Similarity
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862 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 921
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                                     1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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SELBY, Mark
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SRIVASTAVA, Indresh
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                                                                                               97.3%; Score 58.4; DB 1 98.3%; Pred. No. 6.7e-11
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Pred. No. 6.8e-11;
0; Mismatches 1
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                                                                                 Indels
                                                                                                                   Length 1853;
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RESULT 14 US-10-387-336-78

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APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: GELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/10/387,336
CURRENT FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US/09/475,515A
PRIOR APPLICATION NUMBER: US/09/475,515A
PRIOR PILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 78
LENGTH: 1865
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
PEATURE:
PEATURE
INPORMATION: Description of Artificial Sequence: GP1
                                                                                                                  ; TYPE: DNA
; ORGANISM: Artificial Sequence
; PRATURE:
; OTHER INFORMATION: Description of Artificial Sequence: GP2
US-10-387-336-79
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US-10-387-336-79
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US-10-387-336-78
Query Match 97.3%; Score 58.4; DB 13; Length 1865; Best Local Similarity 98.3%; Pred. No. 6.7e-11; Matches 59; Conservative 0; Mismatches 1; Indels 0;
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SEQ ID NO 79
LENGTH: 1865
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APPLICANT: LIU, Hong
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANTON: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REPERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/10/387,336
CURRENT FILING DATE: 2003-03-11
PRIOR APPLICATION NUMBER: US/09/475,515A
PRIOR APPLICATION NUMBER: US/09/475,515A
PRIOR PILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
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APPLICANT: ZUR MEGEDE, J
APPLICANT: SRIVASTAVA, II
APPLICANT: LIAN, Ying
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SRIVASTAVA, Indresh
LIAN, Ying
HARTOG, Karin
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HARTOG, Karin
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Search completed: May 28, 2004, 16:09:15 Job time : 30.7692 secs

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## ALIGNMENTS

#### RESULT 1 AAA51608 31-DEC-1998; 01-SEP-1999; Human immunodeficiency virus. HIV Gag major homology region nucleotides 841-900 AAA51608; AAA51608 standard; DNA; 60 30-DEC-1999; 06-JUL-2000. WO200039304-A2 31-OCT-2000 (CHIR ) CHIRON expression cassette; antigenic; type C; HIV; Env; synthetic; immunization; packaging cell line; antigen presentation; ss. (first CORP. 98US-0114495P. 99US-0152195P. 99WO-US031273. entry) ₽₽

Aaa70412 Aaa70413 Aaa70475 Aaa70476

Expression cassettes comprising a polynucleotide encoding antigenic type C human immunodeficiency virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytotoxic T-lymphocyte (CTL) responses by DNA immunization. Gag of HIV-1 self-assemble into non-infectious virus-like particles which are used as a matrix for the proper presentation of an antigen entrapped or associated to the immune system of the host

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Aca03520 Acc78493

Aca03583 Aaa,70415 Aaa70426 Aaa70417 Aaz52051

Polynucleotide encoding antigenic type polypeptide and the polypeptide useful human against HIV.

C HIV Gag polypeptide or a HIV for immunizing a mammal especia

WPI; 2000-452401/39.

Barnett S,

Zur Megede

Claim 1; Page 92; 113pp; English.

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01-SEP-1999;
                                                                                                                                                       Sequence 1509 BP; 320 A; 556 C; 472 G; 161 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                                                                                      Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env
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standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 104; 113pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially
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                                                                                                                                                                                                   Sequence 1509 BP; 321 A; 559 C; 471 G; 158 T; 0 U; 0 Other;
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01-SEP-1999;
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HIV; ds; vaccine; gene; immune response; microparticle; adsorbent surface; poly(alpha-hydroxy acid); polyhydroxy butyric polycaprolactone; polyorthoester; polycyanoacrylate; detergent; submicron emulsion; viral infection; bacterial infection; parasitic infection; HIV-1 p55gag polypeptide.
                                                                                                                     HIV-1 p55gag
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08-NOV-2002
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                                                                                                            The invention relates to a method of raising an immune response in a host animal. The method of the invention comprises administering a microparticle that has an adsorbent surface to which a first biologically active macromolecule (e.g. a nucleic acid) has been adsorbed. The microparticle comprises a polymer microparticle of poly(alpha-hydroxy acid), a polyhydroxy butyric acid, a polycaprolactone, a polycythoester, a polycyanoacrylate, a detergent, and submicron emulsion. The method/microparticle of the invention is useful for immunising a host animal against viral, bacterial or parasitic infections. The present DNA sequence encodes a HIV-1 p55gag polypeptide. (Updated on 29-AUG-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                     A microparticle to which a biologically active macromolecule is adsorbed, for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a
                                                                                                                                                                                                                                                                                                                                                                                                                28-SEP-2000; 2000US-0236105P.
30-AUG-2001; 2001US-0315905P.
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RESULT

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RESULT 6
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ID ABL3
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DT 15-4
XX
DB Synt

15-MAY-2002 ABL39954;

(first

entry)

ABL39954 standard;

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Synthetic Gag polynucleotide sequence SEQ ID

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                                                                                                                                      The invention relates to a method of raising an immune response in a host animal. The method of the invention comprises administering a microparticle that has an adsorbent surface to which a first biologically active macromolecule (e.g. a nucleic acid) has been adsorbed. The microparticle comprises a polymer microparticle of poly(alpha-hydroxy acid), a polyhydroxy butyric acid, a polycaprolactone, a polyorthoester, a polycyanoacrylate, a detergent, and submicron emulsion. The method/microparticle of the invention is useful for immunising a host animal against viral, bacterial or parasitic infections. The present DNA sequence encodes a HIV-1 p55gag polypeptide. (Updated on 29-AUG-2003 to standardise OS field)
                                                                                                                                                                                                                                                                                                                                                             A microparticle to which a biologically active macromolecule is adsorbed, for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a
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                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polypeptide coding sequence
                                                        100.0%; Score 60; DB 6; 1
100.0%; Pred. No. 5.7e-09;
tive 0; Mismatches 0;
                                                                                                                A; 556 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Donnelly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВP
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                                                                                                                 472 G; 161 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Polo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barnett
                                                                                  Length 1509;
                                                          Indels
                                                                                                                  0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ά
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Singh
                                                          0;
                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 acid;
   900
                             60
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C protein; vpu; env;

env;

nef;

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RESULT 7
ABL39958
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 60; Conserv
               17-JAN-2002
                                                                     Human immunodeficiency virus; type Synthetic.
                                                                                                             Human immunodeficiency virus type C; antigenic HIV type C protein; immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; vpu; env; immunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polynucleotide sequence encoding a polypeptide comprising immunogenic HIV type C polypeptides. The expression cassettes comprise any of the HIV type C sequences encoding Gag, Pol, Vif, Vpr, Tat, Rev, Vpu, Env or Nef (I). (I) have immunostimulant activity and can be used in gene therapy. The HIV type C polynucleotides are useful in applications including DNA immunisation, generation of packaging cell lines, and production of HIV Type C proteins. The polynucleotides are particularly useful in gene therapy and DNA immunisation applications. ABL39942 to ABL40054 and ABB06204 to ABB06215 represent sequences used in the exemplification of
                                           WO200204493-A2
                                                                                                                                                                       Synthetic
                                                                                                                                                                                                  15-MAY-2002
                                                                                                                                                                                                                               АВЬЗ9958;
                                                                                                                                                                                                                                                           ABL39958 standard; DNA; 1509 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1509 BP; 320 A; 556 C; 472 G; 161 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes expression cassettes comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Pig 2; 233pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New polymucleotides encoding antigenic HIV Type C polypeptides, useful applications including DNA immunization or generation of packaging cellines, particularly in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-154920/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zur Megede J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CHIR )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-JUL-2000; 2000US-00610313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JUL-2001; 2001WO-US021241.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200204493-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus type C; antigenic HIV type C immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; v immunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunodeficiency virus; type C.
                                                                                                                                                                                                                                                                                                                                                            -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHIRON CORP.
UNIV STBLLENBOSCH.
                                                                                                                                                                                                                                                                                                                                                GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                     Gag
                                                                                                                                                                                                                                                                                                                                                                                        ilarity 100.0%;
Conservative
                                                                                                                                                                                                   (first entry)
                                                                                                                                                                      polynucleotide sequence SEQ ID NO:21.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Barnett SW,
                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%;
                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Engelbrecht S, Van Rensburg
                                                                                                                                                                                                                                                                                                                                                                                       Score 60; DB Pred. No. 5.700; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                     5.7e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                    DB 6;
                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1509;
                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                         0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes expression cassettes comprising a polynucleotide sequence encoding a polypeptide comprising immunogenic HI type C polypeptides. The expression cassettes comprise any of the HIV type C sequences encoding Gag, Pol, Vif, Vpr, Tat, Rev, Vpu, Env or Nef (I). (I) have immunostimulant activity and can be used in gene therapy. The HIV type C polynucleotides are useful in applications including DNA immunisation, generation of packaging cell lines, and production of HIV Type C proteins. The polynucleotides are particularly useful in gene therapy and DNA immunisation applications. ABL39942 to ABL40054 and ABB06204 to ABB06205 represent sequences used in the exemplification of the polynucleotides are particularly useful in gene abboecost to absolute the polynucleotides are particularly useful in gene absolute to ABL40054 and ABB06204 to ABB06205 represent sequences used in the exemplification of the polynucleotides are useful in the exemple to a polynucleotides are useful in the polynuc
(MEDI-)
(ITAI-)
(UYNA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                 Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human immunodeficiency virus A; HIV A; immunogen; anti-HIV; vaccine; gene therapy; fusion protein; modified vaccinia virus Ankara vector; cytotoxic T-lymphocyte; CTL; epitope; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Example 1; Fig 6; 233pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New polynucleotides encoding antigenic HIV applications including DNA immunization or
                                                                                              23-DEC-1999; 99GB-00030294.
14-OCT-2000; 2000GB-00025234.
                                                                                                                                                                                                                   05-JUL-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAD09487;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAD09487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1509 BP; 321 A; 560 C; 470 G; 158 T; 0 U; 0 Other;
                                                                                                                                                                 22-DEC-2000; 2000WO-GB004984
                                                                                                                                                                                                                                                                WO200147955-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         applications including DNA immunizat
lines, particularly in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-154920/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zur Megede J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-2001; 2001WO-US021241.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                 immunodeficiency virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunodeficiency virus A (HIV A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     £0,
MEDICAL RES COUNCIL.
INT AIDS VACCINE INITIATIVE.
UNIV NAIROBI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard; DNA; 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STELLENBOSCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barnett SW,
                                                                                                                                                                                                                                                                                                                                                            19. .1602
                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                              /product= "HIV A immunogen"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Engelbrecht
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 60; DB 6;
Pred. No. 5.7e-09;
D; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Type C polypeptides, useful in generation of packaging cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Van Rensburg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 1509;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MVA;
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0

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RESULT 9
AAAD09488
ID AAAD0
XX
AC AAAD0
XX
DX 10-5
XX
DX Huma
XX
Huma
XX
Huma
XX
FT CDS
FT
FX
XX
PN WO2
XX
PR 14-
PR 23-
PR 14-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     their corresponding DNA molecules. An immunogen comprises a portion of their corresponding DNA molecules. An immunogen comprises a portion of CC gag protein of HIV from an HIV clade, parts of p17 and p24, modified to CC prevent N-terminal myristoylation; and a synthetic polypeptide comprising CC immunogen is designed to elicit an HIV-specific immune response in CC as vaccine to prevent or treat HIV infection in a human subject. The CC invention also relates to method of stimulating anti-HIV immune response CC invention subject which comprises administering one or mount of nucleic acid molecule sufficient to prime an immune response CC the immunogen, or else may be packaged within a delivery means, such as a CC common portion of the immunogens. The present DNA sequence encodes human CC immunogen consists of about 73% of gag protein fused to a string of 25 partially overlapping human CCL epitopes. The gag domain of HIV A CC contains p24 and p17 in an order reversed to the viral gag p17-p24-p15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 'Best Local Similarity Matches 60; Conserv
   23-DEC-1999; 99GB-00030294.
14-OCT-2000; 2000GB-00025234.
                                                                                                                                                                                                                                                                                                gene therapy; fusion protein; modified vacytotoxic T-lymphocyte; CTL; epitope; ds.
                                                                                                                                                                                                                                                                                                                       Human immunodeficiency virus TA; HIV TA; immunogen; anti-HIV; vaccine; gene therapy; fusion protein; modified vaccinia virus Ankara vector; MVA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel immunogen for stimulating anti-HIV immune response, has a portion of gag protein of HIV from HIV clade, parts of pl7, p24 and synthetic polypeptide comprising human cytotoxic T-lymphocyte epitopes of HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAD09488 standard; DNA; 1914 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to human immunodeficiency virus immunogens and their corresponding DNA molecules. An immunogen communican
                                                       22-DEC-2000; 2000WO-GB004984
                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency virus TA (HIV TA) gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAD09488;
                                                                                                                                                                                                                                                                                                                                                                                                                   10-SBP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-418221/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      472
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                                                                                                                                                                                                                                                                immunodeficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GACATCOGCCAGGGCCCCAAGGAGCCCTTCCGCGGACTACGTGGACCGCTTCTTCAAGACC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mcmichael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP; 314 A; 598 C; 458 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2A; 65pp; English.
                                                                                                                                                                                                          13. .1914
                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                      /product= "HIV TA immunogen"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 60; DB 4; 1 100.0%; Pred. No. 5.7e-09; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1608;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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their corresponding DNA molecules. An immunogen comprises a portion of CC gag protein of HIV from an HIV clade, parts of p17 and p24, modified to prevent N-terminal myristoylation; and a synthetic polypeptide comprising thuman cytotoxic T-lymphocyte (CTL) epitopes of HIV protein. This CC immunogen is designed to elicit an HIV-specific immune response in CC humans. The immunogen is useful in the preparation of a medicament such as vaccine to prevent or treat HIV infection in a human subject. The cinvention also relates to method of stimulating anti-HIV immune response in a human subject which comprises administering one or more times an amount of nucleic acid molecule sufficient to prime an immune response to the immunogen, or else may be packaged within a delivery means, such as a modified vaccinia virus Ankara (MVA) to boost the immune response to common portion of the immunogens. The present DNA sequence encodes human cCC immunodeficiency virus TA immunogen (HIV TA) fusion protein construct. HIV TA construct is based on HIV A immunogen. The HIV A contains p24 and corresponse to shares the same design rationale with HIV A construct, but additionally includes the HIV-1 clade A tat sequence positioned between the gag
 Matches
                    Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel immunogen for stimulating anti-HIV immune response, has a portion of gag protein of HIV from HIV clade, parts of p17, p24 and synthetic polypeptide comprising human cytotoxic T-lymphocyte epitopes of HIV
                                                                                  Sequence 1914 BP; 383 A; 728 C; 534 G; 269 T; 0 U; 0 Other;
                                                                                                                       protein and synthetic human CTL epitopes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 2; Fig 6B; 65pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hanke T, Mcmichael AJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEDI-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention relates to human immunodeficiency virus immunogens and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-418221/44.
 60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDICAL RES COUNCIL.
INT AIDS VACCINE INI
UNIV NAIROBI.
                       Similarity
Conservative
                    100.0%; Score 60; DB 4; 100.0%; Pred. No. 5.8e-09;
 <u>,</u>
   Mismatches
   0;
                                         Length 1914;
     0
 Gaps
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RESULT 10
AAD09489
ID AAD09
XX
AC AAD09
XX
DT 10-SE
XX
DB Human
XX
DB Human
XX
Gene
XW Gene
XW Cytot
XX
FT CDS
FT CDS
FT
XX
FN WO200
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                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                   Human immunodeficiency virus AeT; HIV AeT; immunogen; anti-HIV; vaccine; gene therapy; fusion protein; modified vaccinia virus Ankara vector; MVA cytotoxic T-lymphocyte; CTL; epitope; ds.
                                                                                                        Human immunodeficiency virus
                                                                                                                                                                                               Human immunodeficiency virus AeT (HIV AeT)
                                                                                                                                                                                                                                  10-SEP-2001
                                                                                                                                                                                                                                                               AAD09489;
                                                                                                                                                                                                                                                                                            AAD09489 standard; DNA; 2493
                                                                                                                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                                                                          1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                       GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                 (first entry)
                                                                           Location/Qualifiers
                             product= "HIV AeT immunogen"
                                                                                                                                                                                                                                                                                              ВÞ
                                                                                                                                                                                                  gene
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525 60

WO200147955-A2

05-JUL-2001

22-DEC-2000;

2000WO-GB004984.

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RESULT 11
AAD09490
ID AAD09
XX
AC AAD09
XX
DT 10-SE
XX
DE Humar
XX
KW Humar
KW gene
KW cytot
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                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
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                     Human immunodeficiency virus; PPA; immunogen; anti-HIV; vaccine; gene therapy; fusion protein; modified vaccinia virus Ankara vector; cytotoxic T-lymphocyte; CTL; epitope; ds.
                                                                                                                                         10-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel immunogen for stimulating anti-HIV immune response, has a portion of gag protein of HIV from HIV clade, parts of p17, p24 and synthetic polypeptide comprising human cytotoxic T-lymphocyte epitopes of HIV
                                                                                                    Human
                                                                                                                                                                            AAD09490;
                                                                                                                                                                                                               AAD09490 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2493 BP; 516 A; 887 C; 685 G; 405 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2001-418221/44.
P-PSDB; AAE04827.
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14-OCT-2000;
                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inclusion of an internal ribosome entry site
                                                                                                                                                                                                                                                                                                              466 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                 immunodeficiency virus
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2000GB-00025234.
                                                                                                                                        (first entry)
                                                                                                                                                                                                                  DNA; 4350 BP
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Pred. No. 5.9e-09;
                                                                                                    PPA immunogen.
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their corresponding DNA molecules. An immunogen comprises a portion of CC gag protein of HIV from an HIV clade, parts of p17 and p24, modified to CC prevent N-terminal myristoylation; and a synthetic polypeptide comprising CC immunogen is designed to elicit an HIV-specific immune response in CC immunogen is useful in the preparation of a medicament such humans. The immunogen is useful in the preparation of a medicament such CC as vaccine to prevent or treat HIV infection in a human subject. The care in a human subject which comprises administering one or more times an camount of nucleic acid molecule sufficient to prime an immune response to the immunogen, or else may be packaged within a delivery means, such as a modified vaccinia virus Ankara (MVA) to boost the immune response to common portion of the immunogens. The present DNA sequence encodes human construct is based on HIV A immunogen in the HIV A contains p24 and p17 in an corder reversed to the viral gag p17-p24-p15 polyprotein. PPA shares the same design rationale with HIV A construct, but additionally includes the corderins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MEDI-)
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14-OCT-2000; 2000GB-00025234
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INT AIDS VACCINE INITIATIVE.
UNIV NAIROBI.
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AAA70426
ID AAA7
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AC AAA7
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DT 15-S
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                                                                                                                                                                          60;
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                                                                                                                                                                          Conservative
                                                                                                                                                                         100.0%; Score 60; DE 100.0%; Pred. No. 6.1 tive 0; Mismatches
                                                       ВP
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                                                                                                                                                                                                       DB 4;
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525 60

0

Sequence 4350 BP; 888 A; 1630 C; 1259 G;

573 T; 0 U; 0 Other;

15-SEP-2003

(revised)

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Post-processing: Minimum Match 10%
Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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Perfect score:
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10547.179 Million cell updates/sec
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## SUMMARIES

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## ALIGNMENTS

AUTHORS TITLE	REFERENCE	SOURCE ORGANISM	KEYWORDS	ACCESSION	LOCUS LOCUS	RESULT 1 AX455886
zur Megede, J., Barnett, S.W., Engelbrecht, S. and van Rensburg, B. Polynucleotides encoding antigenic hiv type c polypeptides, polypeptides and uses thereof	Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate lentivirus group.	Human immunodeficiency virus Human immunodeficiency virus	AX455886.1 GI:21714879	AX455886	AX455886 60 bp DNA linear PAT 06-JUL-2002	

pred. No. is the number of results predicted by chance to have a

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REFERENCE
AUTHORS
TITLE
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AUTHORS
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AX455905
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AX455888
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                                                                              zur Megede, J., Barnett, S.W., Engelbrecht, S. Polynucleotides encoding antigenic hiv type polypeptides and uses thereof Patent: WO 0204493-A 21 17-JAN-2002; CHIRON CORPORATION (US) University of Stellows
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Sequence 4 from Patent WO0204493.
AX455888 AX455888.1 GI:21714881
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CORPORATION (US); University of Stellenbosch
Location/Qualifiers
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             /organism="synthetic construct"
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/db_xref="taxon:32630"
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/db_xref="taxon:12721"
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/db_xref="taxon:32630"
/note="synthetic Gag of HIV
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AX468544.1
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Microparticles for delivery of the heterologous nucleic acids Patent: WO 0226209-A 64 04-APR-2002;
CHIRON CORPORATION (US)
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Sequence 68 from Patent
AX468548
AX468548.1 GI:21901378
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Human immunodeficiency virus 1
Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate
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                                                                     /organism="Human immunodeficiency
/mol_type="unassigned DNA"
/db_xref="taxon:11676"
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/mol_type="unassigned DNA"
/db_xref="taxon:11676"
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100.0%; Pred. No. 5.6e-07;
live 0; Mismatches 0;
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AX188558
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MEDICAL RESEARCH COUNCIL (GB); International Aids Vaccine Initiative (US); University of Nairobi (KE)
Location/Qualifiers
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artificial sequences.
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Sequence 29 from Patent
AX188560
AX188560.1 GI:15142200
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MEDICAL RESEARCH COUNCIL (GB); International Aids Vaccine Initiative (US); University of Nairobi (KE)
Location/Qualifiers
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AX188558
AX188558.1 GI:15142199
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                                                     100.0%; ilarity 100.0%; Conservative 0
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                                                                                                                          /organism="synthetic construct"
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/db_xref="taxon:32630"
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Pred. No. 5.4e-07;
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virus-like particles.
BD263651
BD263651.1 GI:33073419
BD263651.1 GI:33073419
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MEDICAL RESEARCH COUNCIL (GB); International Aids Initiative (US); University of Nairobi (KE)
Location/Qualifiers
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Seguence 33 from Patent
AX188564
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Similarity 100.0%; Pred. No. 4.7e-07;
60; Conservative 0; Mismatches 0;
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
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                                                                                                                                                                                                                                       1 (bases 1 to 60)
Barnett,S.W., Megede,J., Greer,C. and Selby,M.
Expression of HIV polypeptides and production of particles
Patent: US 6602705-A 20 05-AUG-2003;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    artificial sequences.

1 (bases 1 to 60)

1 (bases 1 to 60)

Barnett,S., Megede,J.Z., Srivastava,I., Lian,Y., Hartog,K., Greer,C., Selby,M. and Walker,C.

Improved expression of HIV polypeptides and production of
                                                                                                                       ; 65
                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 20 from patent US AR373334
                                                                                                                                                                                                                                                                                                                                                  Unknown
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PI HONG LIU,CATHERINE GREER,MARK SELBY,CHRISTOPHER WALKER PC
C12N15/09,A61K31/711,A61K38/00,A61K48/00,A61P31/18,A61P37/02,
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SUSAN BARNETT, JAN ZUR MEGEDE, INDRESH SRIVASTAVA, YING LIAN, PI
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Patent: JP 2002533124-A 18 08-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
                                                                                                                                                                                                                                                                                                                                  Unclassified.
                                                                                                                                   Similarity
                                                          GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 60
                                                                              GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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31-DEC-1998 US 60/1144
                                                                                                                       Conservative
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JP 2002533124-A/18
08-OCT-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism='Artificial Sequence'.
                                                                                                                                                                                           /organism="unknown"
/mol_type="genomic DNA"
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                  97.3%;
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                                                                                                                    Score 58.4; DB 6; Length 60; Pred. No. 2.7e-06; 0; Mismatches 1; Indels
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                                                                                               particles
patent: US 6602705-A 9 05-AUG-2003;
Location/Qualifiers
1. 1268
                                                                                                                                                                                                                                                                                               AR373325 1268 bp
Sequence 9 from patent US 6602705.
AR373325
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                                                                                                                                                                  1 (bases 1 to 1268)
Barnett, S.W., Megede, J., Greer, C. and Selby, M.
Expression of HIV polypeptides and production
                                                                                                                                                                                                                                     Unknown
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synthetic construct
artificial sequences.
1 (bases 1 to 1268)
Barnett, S., Megede, J.Z., Srivastava, I., Lian, Y., Hartog
Greer, C., Selby, M. and Walker, C.
Improved expression of HIV polypeptides and production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BD263642
Improved expression of HIV polypeptides and production virus-like particles.
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PN JP 2002533124-A/9
PD 08-OCT-2002
PP 30-DEC-1999 JP 2000591193
PR 31-DEC-1998 US 60/114495,01-DEC-1999 US 60/168471 F
R SUSAN BARNETT, JAN ZUR MEGEDE, INDRESH SRIVASTAVA, YING LIAN, PI
                                                                                                                                                                                                                                                    Unknown.
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PI HONG LIU, CATHERINE GREER, MARK SELBY, CHRISTOPHER WALKER PC
C12N15/09, A61K31/711, A61K38/00, A61K48/00, A61P31/18, A61P37/02, I
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Patent: JP 2002533124-A 9 08-OCT-2002;
CHIRON CORP
                                                                                                                                                                                                                    Unclassified.
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Similarity 98.3%;
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/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                            'mol_type="genomic DNA"
                                                                                           organism="unknown"
             97.3%;
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Pred. No. 1.6e-06;
0; Mismatches 1;
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1. .1268
Score 58.4; DB 6; Length 1268; Pred. No. 1.6e-06; 0; Mismatches 1; Indels 0
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JOURNAL
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                                                                                           BD263637
BD263637.1 GI:33073405
JP 2002533124-A/4.
                                                                                                                                                                                                                                                                                                                 1 GACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
artificial sequences.
1 (bases 1 to 1515)
Barnett,S., Megede,J.Z.,
                                                                                                                                                      BD263637
Improved expression of HIV polypeptides and production of virus-like particles.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      artificial sequences.

1 (bases 1 to 1509)

2 ur Megede, J., Chen, M.C., Doe, B., Schaefer, M., Greer, C.E.,

Selby, M., Otten, G.R. and Barnett, S.W.

Increased expression and immunogenicity of sequence-modified human immunodeficiency virus type 1 gag gene

J. Virol. 74 (6), 2628-2635 (2000)
                                                            synthetic construct
synthetic construct
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF201927.1 GI:7248702
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             /product="gag protein"
/protein_id="AAF43628.1"
/protein_id="AAF43628.1"
/db_xref="GI:7248703"
/translation="MGARASVLSGGELDKWEKIRLRPGGKKKYKLKHIVWASRELERF
/translation="MGARASVLSGGELDKWEKIRLRPGGKKKYKLKHIVWASRELERF
/translation="MGARASVLSGGELDKWEKIYNTVATLYCVHQRIDVKDTKEALE
KIEEQNKSKKKAQQAAAAAGTGNSSQVSQNYPIVQNLQGQMVHQAISPRTLNAWVKV
VBEKAFSPEVIPMFSALSEGATPQDLNTMLNTVGGHQAMQMLKETINBEAAEDDRVH
PVHAGPIAPGQMREPRGSDIAGTTSTLQEQIGWMTNNPPIPVGBIYKRWIILGLNKIV
RMYSPTSILDIRQGPKEPFRDYVDRFYKTLRAEQASQDVKNWMTETLLVQNANPDCKT
ILKALGPAATLEEMMTACQGVGGPGHKARVLAEAMSQVTNPATIMMQRGNFRNQRKTV
KCPNCGKEGHTARNCRAPRKKGCWRCGREGHQMKDCTERQANFLGKIWPSYKGRPGNF
LQSRPEPTAPPEESFRPGEEKTTPSQKQEPIDKELYPLTSLRSLFGNDPSSQ"
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transl_table=11
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db_xref="taxon:32630"
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Pred. No. 1.6e-06;
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    Srivastava, I., Lian, Y., Hartog, K., Liu, H.,
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                                                                                                                                                                                  Query Match
Best Local S
Matches 59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
862 GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACTACGTGGACCGCTTCTACAAGACC 921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent: JP 20
CHIRON CORP
OS Artific
PN JP 20021
PD 08-OCT-1
PF 30-DEC-
                                                   1 GACATCCGCCAGGGCCCCAAGGAGCCCCTTCCGCGACTACGTGGACCGCCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PF 30-DEC-1999 JP 2000591193
PR 31-DEC-1998 US 60/114495,01-DEC-1999 US 60/168471
PR 31-DEC-1998 US 60/114495,01-DEC-1999 US 60/168471
PR 31-DEC-1998 US 60/1168471
PR 31-DEC-1998 US 60/168471
PR 31-DEC-1999 US 60/168471
PR 31-DEC-1999 JP 2000591193
PR 31-DEC-1999 JP 2000591193
PR 31-DEC-1999 JP 2000591193
PR 31-DEC-1999 US 60/168471
PR 
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Description of Artificial Sequence: synthetic HIV-Gag FI
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Greer, C., Selby, M. and Walker, C. Improved expression of HIV polypeptides and production of virus-like particles
Patent: JP 2002533124-A 4 08-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PI HONG LIU, CATHERINE GREER, MARK SELBY, CHRISTOPHER WALKER PC C12N15/09, A61K31/711, A61K38/00, A61K48/00, A61P31/18, A61P37/02, 1
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                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                  97.3%;
nilarity 98.3%;
Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='Artificial Sequence'
Location/Qualifiers
1. .1515
                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism≈"synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                      Score 58.4; DB 6; Pred. No. 1.6e-06; 0; Mismatches 1;
                                                                                                                                                                                                                                                                                      Length 1515;
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Search completed: May 28, 2004, 13:23:16 Job time : 247.567 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
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     111098765432F
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                                                                                                                                                                                                                                                                                                                   d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
     nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                             Published Applications NA:*

1: /cgn2 6/ptodata/1/pubpna/US07 PUBCOMB.seq:*

2: /cgn2-6/ptodata/1/pubpna/US06 NEW PUB.seq:*

4: /cgn2 6/ptodata/1/pubpna/US06 NEW PUB.seq:*

4: /cgn2 6/ptodata/1/pubpna/US07 NEW PUB.seq:*

5: /cgn2 6/ptodata/1/pubpna/US07 NEW PUB.seq:*

6: /cgn2 6/ptodata/1/pubpna/US08 NEW PUB.seq:*

7: /cgn2 6/ptodata/1/pubpna/US08 NEW PUB.seq:*

8: /cgn2 6/ptodata/1/pubpna/US08 PUBCOMB.seq:*

9: /cgn2 6/ptodata/1/pubpna/US09 PUBCOMB.seq:*

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11: /cgn2 6/ptodata/1/pubpna/US09 PUBCOMB.seq:*

12: /cgn2 6/ptodata/1/pubpna/US09 PUBCOMB.seq:*

13: /cgn2 6/ptodata/1/pubpna/US09 PUBCOMB.seq:*

14: /cgn2 6/ptodata/1/pubpna/US09 PUBCOMB.seq:*

15: /cgn2 6/ptodata/1/pubpna/US10A PUBCOMB.seq:*

16: /cgn2 6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

17: /cgn2 6/ptodata/1/pubpna/US10B PUBCOMB.seq:*

18: /cgn2 6/ptodata/1/pubpna/US10 NEW PUB.seq:*

19: /cgn2 6/ptodata/1/pubpna/US10 NEW PUB.seq:*

19: /cgn2 6/ptodata/1/pubpna/US10 NEW PUB.seq:*
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Copyright (c) 1993 - 2004 Compugen Ltd.
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US-09-899-575-1
US-09-899-575-53
US-09-967-464-67
US-09-967-464-67
US-09-899-575-20
US-09-899-575-51
US-09-899-575-51
US-10-190-435-57
US-10-190-305A-15
US-10-190-435-18
US-10-190-435-18
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8870.358 Million cell updates/sec
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Sequence 1, Appli
Sequence 53, Appl
Sequence 63, Appl
Sequence 67, Appl
Sequence 3, Appli
Sequence 20, Appl
Sequence 51, Appl
Sequence 51, Appl
Sequence 57, Appl
Sequence 15, Appl
Sequence 15, Appl
Sequence 15, Appl
Sequence 16, Appl
Sequence 16, Appl
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45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15
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13	15	15	15	15	15	15	13	13	13	13	15	15	<u>1</u> 5	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
-899-	-10-	-10-138-	US-10-138-098-22	8-098-	-10-138-	US-10-138-098-12	-10-359-120-	0-359-120-	-10-359-	-10-359-120-	-10-190-	US-10-190-435-58	US-10-190-305A-12	US-10-190-435-12	US-10-190-305A-13	0	US-10-190-305A-83	-10	US-10-190-435-38	US-10-190-435-36	-10-1	US-10-190-435-35	0-1	0-190-435-	-10-190	0-190-435-	-10-190-435-	0-190-435-	-10-190-435-	US-10-190-435-13
Sequence 2, Appli	24	23	22	21,	Sequence 13, Appl	12,	174,	Sequence 176, App	169,	168,	82	58,	12,	12,	13,		83,	59,	38,	Sequence 36, Appl	34,	ω5,	Sequence 14, Appl	19,	11,		e 9, 1	e 15,	e 14,	e 13,

### ALIGNMENTS

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US-09-899-575-1
Sequence 1, Application US/09899575
Publication No. US20030223961A1
GENERAL INFORMATION:
APPLICANT: Edge-de, Jan
APPLICANT: Edge-de, Jan
APPLICANT: Edge-lebr-echt, Susan W.
APPLICANT: Van Rensburg, Estrelita Janse
ITILE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
ITILE OF INVENTION: POLYNUCLEOTIDES, POLYPETIDES AND USES THEREOF
FILE REFERENCE: POLYPETIDES, POLYPETIDES,
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                                                                                                                                                              ; SEQ ID NO 63
; LENGTH: 1479
; TYPE: DNA
; ORGANISM: Human immunodeficiency virus type 1
US-09-967-464-63
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OTHER INFORMATION: Description of Artificial Sequence: HIV Type C Gag
OTHER INFORMATION: Major Homology Region Optimized
US-09-899-575-53
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                                                                                                   Query Match
Best Local Similarity
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TITLE OF INVENTION: POLYNUCLECTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
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APPLICANT: Zur Mege
APPLICANT: Barnett
                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR FILING DATE: 2000-09-28
PRIOR APPLICATION NUMBER: 60/315,905
PRIOR APPLICATION NUMBER: 60/315,905
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 68
                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
APPLICANT: Ulmer, Jr., Thomas W.
APPLICANT: Dubensky, Jr., Thomas W.
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS
FILE REPERENCE: PP16269.004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: O'Hagan, Derek APPLICANT: Otten, Gillis APPLICANT: Donnelly, John J. APPLICANT: Polo, John M.
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TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
 844 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                  60;
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Barnett, Susan
                                          GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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No. US20030138453A1
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                                                                                                    100.0%; Score 60; DB 10; 100.0%; Pred. No. 2.6e-12;
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Pred. No. 2.5e-12;
Mismatches 0;
                                                                                     Mismatches
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                                                                                     Indels
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RESULT 4 US-09-967-464-67 ; Sequence 67, A

Application US/09967464

RESULT 6 US-09-899-575-20

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APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Barnett, Susan W.
APPLICANT: Bgnelbrecht, Susan
APPLICANT: Wan Rensburg, Estrelita Janse
APPLICANT: van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT PILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
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                                                                                              Matches
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                                                                                                                                        Query Match
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APPLICANT: Singh, Mamohan
APPLICANT: Ulmer, Jeffrey
APPLICANT: Ulmer, Jeffrey
APPLICANT: Dubensky, Jr., Thomas W.
TITLE OF INVENTION: MICROPARTICLES FOR DELIVERY OF HETEROLOGOUS NUCLEIC ACIDS
FILE REFERENCE: PP16269.004
FILE REPERENCE: PP16269.004
CURRENT APPLICATION NUMBER: US/09/967,464
CURRENT FILING DATE: 2002-04-11
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR APPLICATION NUMBER: 60/236,105
PRIOR PILING DATE: 2000-09-28
PRIOR PILING DATE: 2001-08-30
PRIOR FILING DATE: 2001-08-30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                 FEATURE: OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag OTHER INFORMATION: of HIV strain AF110965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA ORGANISM: Human immunodeficiency virus type 1
                                                                                                                                                                                                                                                                                      TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                       LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              844 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60;
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                                   1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
                                                                                                                  Similarity
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                                                                                              Conservative
                                                                                                                  100.0%; Score 60; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>0</u>
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                                                                                              Mismatches
                                                                                                                    2.6e-12;
                                                                                                                                              DB 13;
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APPLICANT: van Rensburg, Estrelita Janse
APPLICANT: van Rensburg, Estrelita Sanctifenic Hiv Type C
TITLE OF INVENTION: POLYPEPTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S-09-899-575-99
Sequence 99, Application US/09899575
Publication No. US20030223961A1
GENERAL INFORMATION:
                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                            SEQ ID NO 99
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                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION: Description of Artificial Sequence: synthetic Gag
OTHER INFORMATION: coding sequence of HIV strain AF110965
-09-899-575-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: .van Rensburg, Estrelita Janse
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USBS THEREOF
FILE REFERENCE: PP01631.102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan
APPLICANT: Egnelbrecht, Su
APPLICANT: van Rensburg, I
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APPLICANT: Barnett, Susan
APPLICANT: Egnelbrecht, Su
APPLICANT: van Rensburg, I
                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: Artificial Sequence
FBATURE:
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                                                                                                                                                                                                                                                                                                                  LENGTH: 1491
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  841
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60; Conserv
                          GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
  GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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Egnelbrecht, Susan
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                                                                                        100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 60; DB 13; larity 100.0%; Pred. No. 2.6e-12; Conservative 0; Mismatches 0;
                                                                                              0
                                                                                          Score 60; DB 13;
Pred. No. 2.6e-12;
D; Mismatches 0;
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RESULT 8
US-09-899-575-51
; Sequence 51, Application US/09899575
; Publication No. US20030223961A1

; Sequence 57, Application US/10190435; Publication No. US20030143248A1; GENERAL INFORMATION:
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: BARNETT, Susan W.

RESULT 10 US-10-190-435-57

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; OTHER INFORMATION: Description of Artificial Sequence: GagTatRevNef_C
US-10-190-435-20
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                                                                                                                                                                                                                                          SEQ ID NO 20
LENGTH: 2742
TYPB: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 20, Application US/10190435 Publication No. US20030143248A1 GENERAL INFORMATION:
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LENGTH: 1494
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                       Matches
                                                                                                         Query Match
Best Local Similarity
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APPLICANT:
APPLICANT:
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APPLICANT: Zur Megede, Jan
APPLICANT: Barnett, Susan W.
APPLICANT: Egnelbrecht, Susan
                                                                                                                                                                                                                                                                                                                                APPLICANT: VAN RENSBURG, ESTRElita J.

TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE (
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133

CURRENT APPLICATION NUMBER: US/10/190,435

CURRENT FILING DATE: 2002-12-30

NUMBER OF SEQ ID NOS: 319

SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
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TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP01631.102
CURRENT APPLICATION NUMBER: US/09/899,575
CURRENT FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR APPLICATION NUMBER: 09/475,704
PRIOR FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: ZUR MBGEDE, Jan
APPLICANT: BARNETT, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: HIV Type
OTHER INFORMATION: Gag optimized
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      841 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 900
 850 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTC
                         1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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                                                                                       60; Conservative
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ENGELBRECHT, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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                                                                                                           100.0%;
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                                                                                     Score 60; DB 15;
Pred. No. 2.7e-12;
); Mismatches 0;
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                                                                                         Indels
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   TCAAGACC 909
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Sequence 15, Application US/10190305A; Publication No. US20030198621A1; Publication No. US20030198621A1; GENERAL INFORMATION:

APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, Susan
APPLICANT: LIAN, Ying
TITLE OF INVENTION: POLYNUCLECTIDES ENCODING ANTIGENIC HIV TYPE B AND/OR
TITLE OF INVENTION: TYPE C POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: 2302-18702 / 18702.002
CURRENT APPLICATION NUMBER: US/10/190,305A
CURRENT PILING DATE: 2002-07-05
NUMBER OF SEQ ID NOS: 93
SOPTWARE: Patentin Ver. 2.0
SEQ ID NO 15
Sequence 81, Application US/10190305A

Publication No. US20030198621A1

GENERAL INFORMATION:
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, Susan
APPLICANT: LIAN, Ying
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV
TITLE OF INVENTION: TYPE C POLYPEPTIDES, POLYPEPTIDES AND
PILE REFERENCE: 2302-18702 / 18702.002
CURRENT APPLICATION NUMBER: US/10/190,305A
CURRENT FILING DATE: 2002-07-05
NUMBER OF SEQ ID NOS: 93
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US-10-190-305A-15
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                                                                                                                                                                                                                                                                                         US-10-190-305A-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: Description of Artificial Sequence: GagTatRevNef_CUS-10-190-305A-15
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LENGTH: 2742
TYPB: DNA
ORGANISM: Artificial Sequence
FEATURE:
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Best Local (
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TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133
CURRENT APPLICATION NUMBER: US/10/190,435
CURRENT FILING DATE: 2002-12-30
NUMBER OF SEQ ID NOS: 319
SOFTWARE: Patentin Ver. 2.0
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APPLICANT:
APPLICANT:
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
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Pred. No. 2.7e-12;
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                                                                                                        HIV TYPE B AND/OR AND USES THERBOF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 18
LENGTH: 3162
TYPE: DNA
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SEQ ID NO 81
LENGTH: 2742
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, Susan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 18, Application US/10190435 Publication No. US20030143248A1
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Best Local Similarity
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                                            SEQ ID NO 16
                                                                                                                                                                                                                                                                                                                                                                               Sequence 16, Application US/10190435 Publication No. US20030143248A1
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APPLICANT: LIAN, Ying
APPLICANT: ENGELBRECHT, Susan
APPLICANT: ENGELBRECHT, Susan
APPLICANT: ENGELBRECHT, Susan
APPLICANT: VAN RENSBURG, Esteville J.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133
CURRENT APPLICATION NUMBER: US/10/190,435
CURRENT FILING DATE: 2002-12-30
NUMBER OF SEQ ID NOS: 319
SOFTWARE: Patentin Ver. 2.0
                                                                 APPLICANT: ZUR MEGEDE, Jan
APPLICANT: BARNETT, Susan W.
APPLICANT: LIAN, Ying
APPLICANT: ENGELBRECHT, Susan
APPLICANT: WAN RENSBURG, Estrelita J.
APPLICANT: VAN RENSBURG, Estrelita J.
TITLE OF INVENTION: POLYNUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYPEPTIDES, POLYPEPTIDES AND USES THEREOF
FILE REPERENCE: PP18133.003 / 2302-18133
CURRENT APPLICATION NUMBER: US/10/190,435
CURRENT FILING DATE: 2002-12-30
NUMBER OF SEQ ID NOS: 319
SOFTWARE: Patentin Ver. 2.0
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LENGTH: 3462
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ORGANISM: Artificial Sequence

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US-10-190-435-13

; Sequence 13, Application US/10190435
; Publication No. US20030143248A1
; GENERAL INFORMATION:
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: LIAN, Ying
APPLICANT: ENGELBRECHT, Susan
APPLICANT: ENGELBRECHT, Susan
APPLICANT: WAN RENSBURG, Estrelita J.
APPLICANT: UNENTION: POLYMUCLEOTIDES ENCODING ANTIGENIC HIV TYPE C
TITLE OF INVENTION: POLYMUCLEOTIDES AND USES THEREOF
FILE REFERENCE: PP18133.003 / 2302-18133
; CURRENT APPLICATION NUMBER: US/10/190,435
; CURRENT FILING DATE: 2002-12-30
; NUMBER OF SEQ ID NOS: 319
; SOFTWARE: PatentIn Ver. 2.0
SEQ ID NO 13
LENGTH: 3531
TYPE: DNA
ORGANISM: Artificial Sequence
PEATURE:
OTHER INFORMATION: Description of Artificial Sequence: GagPolmut_C
US-10-190-435-13
Search completed: May 28, 2004, 16:09:15 Job time: 31.7692 secs
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                                                                                                                                                                                                                   Query Match 100.0%; Score 60; DB 15; Length 3531; Best Local Similarity 100.0%; Pred. No. 2.7e-12; Matches 60; Conservative 0; Mismatches 0; Indels 0
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Best Local Similarity
Matches 60; Conserv
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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
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Title:
Perfect score:
Sequence:
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Listing first 45 summaries
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score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Sequence	Improved	Sequence	Improved	sequence	TIMPLOVED	sequence	Timproved	Tagactica	Source of the state of the stat	Segrence	Improved	Improved	Sequence	Improved		1 Synthetic	Sequence	Improved	7 Synthetic	Sequence	Improved	Sequence	Improved	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Synthe	Sequence	Sequence	Sequence ·	Sequence	Sequence	equ		ion									

# ALIGNMENTS

RESULT 1		
AX455885		
Locus	AX455885 60 bp DNA linear PAT 06-JUL-2002	
DEFINITION	Sequence 1 from Patent WO0204493.	
ACCESSION	AX455885	
VERSION	AX455885.1 GI:21714878	
KEYWORDS		
SOURCE	Human immunodeficiency virus	
ORGANISM	Human immunodeficiency virus	
	Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate	
	lentivirus group.	
REFERENCE	1	
AUTHORS	zur Megede, J., Barnett, S.W., Engelbrecht, S. and van Rensburg, E.	
TITLE	Polynucleotides encoding antigenic hiv type c polypeptides,	
	polymentides and uses thereof	

Pred. No. is the number of results predicted by chance to have a

ORIGIN

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ACCESSION
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KEYWORDS
SOURCE
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AX455887
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CORPORATION (US); University
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/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="HIV Type C Gag Major Homology Region Optimized"
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/mol_type="unassigned DNA"
/db_xref="taxon:12721"
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            mol_type="unassigned DNA"
db_xref="taxon:32630"
                                        organism="synthetic construct"
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note="synthetic Gag of HIV
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Pred. No. 2.8e-07;
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AX468543
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AX455904
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Human immunodeficiency virus 1
Viruses; Retroid viruses; Retroviridae; Lentivirus;
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                                                                                                                                                 O'Hagan,D., Otten,G., Donnelly,J.J., Polo,J.M., Barnett,S.,. Singh,M., Ulmer,J. and Dubensky,T.W. Microparticles for delivery of the heterologous nucleic acids Patent: WO 0226209-A 63 04-APR-2002;
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                                                                 /organism="Human immunodeficiency
/mol_type="unassigned DNA"
/db_xref="taxon:11676"
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/db_xref="taxon:32630"
/note="synthetic Gag coding seg
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from Patent W00204493.
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1 (bases 1 to 1485)

1 (bases 1 to 1485)

Gao, F., Li, Y., Decker, J.M., Peyerl, F.W., Bibollet-Ruche, F., Gao, F., Li, Y., Decker, Y., Shaw, D.R., Allen, S., Musonda, R., Rodenburg, C.M., Chen, Y., Shaw, D.R., and Hahn, B.H.

Shaw, G.M., Zajac, A.J., Letvin, N. and Hahn, B.H.

Codon usage optimization of HIV type 1 subtype C gag, pol, nef genes: in vitro expression and immune responses in DNA-vaccinated mice

DNA-vaccinated mice

DNA-vaccinated mice
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                                                                                                                                                Submitted (16-NOV-2002) Medicine, Duke University Medical Center, 112 RPIII, LaSalle Street, Durham, NC 27710, USA Location/Qualifiers
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Microparticles for delivery of the heterologous nucleic acids Patent: WO 0226209-A 67 04-APR-2002;
CHIRON CORPORATION (US)
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2 (bases 1 to 1485)
Gao, F., Li, Y., Decker, J.M., Bibollet-Ruche, F., Rodenburg, C.M., Chen, Y., Shaw, D.R., Allen, S., Musonda, R., Shaw, G.M., Zajac, A.J. and
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Synthetic construct HIV-1-derived gag
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Human immunodeficiency virus 1
Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate
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/gene="gag"
1. .1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
1. .1479
                                                                          /organism="synthetic construct"
/mol_type="genomic DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Human immunodeficiency virus
/mol_type="unassigned DNA"
/db_xref="taxon:11676"
                                                                                                                                    1. .1485
                                                         note="codon
                                     .1485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:37413992
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100.0%; Pred. No. 1.9e-07;
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                                                         usage optimization of HIV-1 96ZM651"
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WO0226209
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protein (gag)
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gene, complete
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AX455935
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AX455983
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                                                                                                                                                                                                                                                                                           841 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                      1494 bp
Sequence 51 from Patent WO0204493.
AX455935
AX455935.1 GI:21714919
                                                                                                                                                                                                                                                                                                              1 GACATCAAGCAGGGCCCCAAGGAGCCCCTTCCGGCGACTACGTGGACCGCCTTCTTCAAGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
AX455983
zur Megede, J., Barnett, S.W., Engelbrecht, S. and van Rensburg, B. Polynucleotides encoding antigenic hiv type c polypeptides, polypeptides and uses thereof
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                                                                                        synthetic construct synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent: WO 0204493-A 99 17-JAN-2002;
CHIRON CORPORATION (US); University
Location/Qualifiers
1. .1491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    zur Megede, J., Barnett, S.W., Engelbrecht, S. and van Rensburg, E. Polymucleotides encoding antigenic hiv type c polypeptides, polypeptides and uses thereof
                                                                         artificial
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/transl_table=11
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/protein_id="AAO65393.1"
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/translation="MGARASILRGGKLDKWEKIRLRPGGKKRYMIKHLVWASRELERF
                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Gag_TV2_C_ZAopt"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="synthetic construct"
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                                                                        sequences.
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; Pred. No. 1.9e-07;
0; Mismatches 0;
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Pred. No. 1.9e-07;
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WO0204493
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                                                                                                                                                                                                                                                                                                                                                                  0;
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AX427931
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AX427930
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Local Similarity 100.0%;
les 60; Conservative 0;
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Sequence 169 from Patent
AX427931 GI:21538018
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Modifications of hiv env, gag, and pogenetic immunization

Patent: WO 0232943-A 168 25-APR-2002;

GOVERNMENT OF THE UNITED STATES (US)

Location/Qualifiers
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synthetic construct
artificial sequences.
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Sequence 168 from Patent
AX427930
AX427930.1 GI:21538017
                                                       genetic immunization
Patent: WO 0232943-A 169 25-APR-2002;
GOVERNMENT OF THE UNITED STATES (US)
Location/Qualifiers
                                                                                                                  Huang, Y. and Nabel, G.J.
Modifications of hiv env, gag, and pol
                                                                                                                                                                             synthetic construct synthetic construct
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                                                                                                                                                              artificial sequences.
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1. .1494
                                              1. .9169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="HIV Type C Gag optimized"
                            organism="synthetic construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="plasmid pVR1012x/s containing HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .9166
_type="unassigned DNA"
xref="taxon:32630"
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WO0232943
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AX427936
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AX427938
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Best Local S
Matches 60
Query Match
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Matches 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                  1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGGGGACTACGTGGACCGCTTCTTCAAGACCC
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                                                                                                                                        Huang, Y. and Nabel, G.J.

Modifications of hiv env, gag, and pogenetic immunization
Patent: WO 0232943-A 174 25-APR-2002;
GOVERNMENT OF THE UNITED STATES (US)
Location/Qualifiers
                                                                                                                                                                                                                                          synthetic construct
synthetic construct
artificial sequences.
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genetic immunization
Patent: WO 0232943-A 176 25-APR-2002;
GOVERNMENT OF THE UNITED STATES (US)
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h 100.0%; Score 60; DB 6; l Similarity 100.0%; Pred. No. 1.5e-07; 50; Conservative 0; Mismatches 0;
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Similarity 100.0%; Pred. No. 1.5e-07;
50; Conservative 0; Mismatches 0;
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100.0%; Pred. No. 1.5e-07;
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AX455888
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                                                          Query Match 92.0%; Score 55.2; DB 6; Length 1509; Best Local Similarity 95.0%; Pred. No. 4.8e-06; Matches 57; Conservative 0; Mismatches 3; Indels 0
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synthetic construct
artificial sequences.
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Sequence 4 from Patent WO0204493.
AX455888
                              1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      zur Megede,J., Barnett,S.W., Engelbrecht,S. and van Rensburg,E.
Polynucleotides encoding antigenic hiv type c polypeptides,
polypeptides and uses thereof
Patent: WO 0204493-A 2 17-JAN-2002;
CHIRON CORPORATION (US) ; University of Stellenbosch (ZA)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus
Human immunodeficiency virus
Viruses; Retroid viruses; Retroviridae; Lentivirus; Primate
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AX455886 AX455886.1 GI:21714879
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Search completed: May 28, Job time: 247.567 secs

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Maximum Match 100%
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I DNA of HI
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31-0CT-2000 AAA51607;

(first entry)

AAAS1607 standard; DNA;

60 BP.

HIV Gag major homology region nucleotides 844-903

45	44	43	42	41	<u>4</u> 0	39	38	37	36	35	34	ω W	32	31	30	29	28	27	26	25	24
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AAD53107	AAD53106	AAD53105	AAD53097	AAD53096	ABK91622	ABK91624	ABK91617	ABK91616	ADC13279	ACA03591	ADC13233	ACA03521	ADC13238	ACA03522	ADC13280	ACA03592	ADC13259	ADC13257	ADC13255	ADC13256	ADC13240
Aad53107	Aad53106	Aad53105	Aad53097	Aad53096	Abk91622	Abk91624	Abk91617	Abk91616	Adc13279	Aca03591	Adc13233	Aca03521	Adc13238	Aca03522	Adc13280	Aca03592	Adc13259	Adc13257	Adc13255	Adc13256	Adc13240
Human imm	Human imm	Human imm	p1	Gag p17/2	Modified	Modified	Modified	Modified	DNA of HI	Synthetic	DNA of HI	ct	DNA of HI	Synthetic	DNA of HI	Synthetic	DNA of HI	DNA of HI	0	DNA of HI	DNA of HI

### ALIGNMENTS

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31-DEC-1998;
01-SEP-1999;
                                                                                                                                                              Human immunodeficiency virus.
                                                                                             Barnett S,
                                                                                                                                 30-DEC-1999;
                                                                                                                                          06-JUL-2000
                                                                                                                                                     WO200039304-A2.
                                                                                                        (CHIR ) CHIRON CORP.
                                                                                                                                                                        expression cassette; antigenic; type C; HIV; Env; synthetic; immunization; packaging cell line; antigen presentation; ss.
                                                                                             Zur Megede
                                                                                                                 98US-0114495P.
99US-0152195P.
                                                                                                                                 99WO-US031273.
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Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially human against HIV.

WPI; 2000-452401/39.

Claim 1; Page 92; 113pp; English.

Expression cassettes comprising a polynucleotide encoding antigenic type C human immunodeficiency virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytotoxic T-lymphocyte (CTL) responses by DNA immunization. Gag of HIV-1 self-lymphocyte into non-infectious virus-like particles which are used as a assemble into non-infectious virus-like particles which are used as a matrix for the proper presentation of an antigen entrapped or associated to the immune system of the host 0f

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Best Local 9
                                                                                                                                                              The present invention describes expression cassettes comprising a polynucleotide sequence encoding a polypeptide comprising immunogenic HIV type C polypeptides. The expression cassettes comprise any of the HIV type C sequences encoding Gag, Pol, Vif, Vpr, Tat, Rev, Vpu, Env or Nef (I). (I) have immunostimulant activity and can be used in gene therapy. The HIV type C polynucleotides are useful in applications including DNA immunisation, generation of packaging cell lines, and production of HIV Type C proteins. The polynucleotides are particularly useful in gene therapy and DNA immunisation applications. ABL39942 to ABL40054 and ABB06204 to ABB06215 represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                                                                                                                 New polynucleotides encoding antigenic HIV Type C polypeptides, useful in applications including DNA immunization or generation of packaging cell lines, particularly in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human immunodeficiency virus type C; antigenic HIV type C protein; immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; vpu; env; nef; immunostimulant; gene therapy; gene; ds.
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                                                                                                                    Sequence 60 BP; 14 A; 22 C; 15 G; 9 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                       Example 1; Fig 24; 233pp; English.
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                                                          100.0%; Score 60; DB 6; Length ilarity 100.0%; Pred. No. 9.4e-10; Conservative 0; Mismatches 0; Indel
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RESULT 4
AAA51625
ID AAA5
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AC AAA5
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DT 31-C

AAA51625 standard; DNA; 1479

31-OCT-2000

(first entry)

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AAA51609

XX AAA5

XX AAA5

XX AAA5

XX AAA5

XX Gag;

XX Gag;

XX PH Key

FH Key

FH CDS

FH CDS

FH CDS

XX WO20

XX WPI;

PR 01-S

PR 01-S

PR 01-S

PR P-PS

XX WPI;

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Best Local Similarity
                                                                                                                                                                                                                                                                                                                    Expression cassettes comprising a polynucleotide encoding antigenic type C human immunodeficiency virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytotoxic T-lymphocyte (CTL) responses by DNA immunization. Gag of HIV-1 self-assemble into non-infectious virus-like particles which are used as a matrix for the proper presentation of an antigen entrapped or associated to the immune system of the host
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Polynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially human against HIV.
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                                                                                                                                                                                                                                                              Sequence 1479 BP; 325 A; 529 C; 463 G; 162 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 2; Page 92-93; 113pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               31-DEC-1998;
01-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (CHIR ) CHIRON
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844 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACCTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                60;
                                                          1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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99US-0152195P.
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/note= "Codon usage pattern was modified and inhibitory
elements (INS) and RRE sites were inactivated resulting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
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                                                                                                                                                                100.0%; Score 60; DB 3; 100.0%; Pred. No. 1.3e-09;
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                                                                                                                                     Mismatches
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                                                                              HIV; ds; vaccine; gene; immune response; microparticle; adsorbent surface; poly(alpha-hydroxy acid); polyhydroxy butyric polycaprolactone; polyorthoester; polycyanoacrylate; detergent; submicron emulsion; viral infection; bacterial infection; parasitic infection; HIV-1 p55gag polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rolynucleotide encoding antigenic type C HIV Gag polypeptide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially human against HIV.
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01-SEP-1999;
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08-NOV-2002
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                                                                                                                                                                HIV-1 p55gag polypeptide coding sequence 1.
                                                                                                                                                                                                                                                                AAL44548 standard; DNA; 1479
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99US-0152195P.
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100.0%; Pred. No. 1.3
ative 0; Mismatches
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cheв 0;
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Matches 60
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 29-AUG-2003
08-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A microparticle to which a biologically active macromolecule is adsorbed, for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a
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30-AUG-2001;
                                                 AAL44552;
                                                                                AAL44552 standard; DNA; 1479
                                                                                                                                                                                                                                                                                          Sequence 1479 BP; 325 A; 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 72;
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                                                                                                                                                             844 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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wbensky TW;
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2001US-0315905P.
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(revised)
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RESULT 6
AAL44552
ID AAL4
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AC AAL4
XX
AC AAL4
XX
AC AAL4
XX
DT 29-A
DT 08-N
XX
HIV-
XX
HIV-
XX
KW HIV-
XW adsc
XW poly
KW subm
XW poly
KW subm
KW para
XX
Huma
XX
FH Key
FT vari
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                                                                                                                                                                             adsorbent surface; poly(alpha-hydroxy acid); polyhydroxy butyric acid; polycaprolactone; polyorthoester; polycyanoacrylate; detergent; submicron emulsion; viral infection; bacterial infection; parasitic infection; HIV-1 p55gag polypeptide.
            variation
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RESULT 7
ABL39953
ID ABL3
XX
AC ABL3
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AC ABL3
XX
DT 15-W
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DB Synt
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CHUMA
KW Huma
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Ulmer J, D
 Human immunodeficiency virus; Synthetic.
                                    Human immunodeficiency virus type C; antigenic HIV type C protein; immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; vpu; env; immunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A microparticle to which a biologically active macromolecule is adsorbed, for use as a vaccine composition to treat viral, bacterial or parasitic infections, comprises a polymer microparticle, a detergent and a
                                                                                          Synthetic Gag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a method of raising an immune response in a host animal. The method of the invention comprises administering a
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30-AUG-2001; 2001US-0315905P
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                                                                                                                     15-MAY-2002
                                                                                                                                               ABL39953;
                                                                                                                                                                        ABL39953 standard;
                                                                                                                                                                                                                                                                                                                                            Sequence 1479 BP; 325 A; 534 C; 460 G; 160 T; 0 U; 0 Other;
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ubensky TW;
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                                                                                           polynucleotide sequence SEQ ID NO:3.
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RESULT 8
ABL39957
ID ABL3
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AC ABL3
XX
DT 15-M
XX
CW Huma
KW Huma
KW immu
XX
SYNt
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OS SYNt
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                                                                                                                                                                                      Human immunodeficiency virus; type C. Synthetic.
                                                                                                                                                                                                                                 Human immunodeficiency virus type C; antigenic HIV type C immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; v immunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New polynucleotides encoding antigenic HIV Type C polypeptides, useful applications including DNA immunization or generation of packaging cell lines, particularly in gene therapy.
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                                                             05-JUL-2000; 2000US-00610313.
                                                                                                                                                                                                                                                                                                Synthetic Gag polynucleotide sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1479 BP; 325 A; 529 C; 463 G; 162 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes expression cassettes comprising a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Example 1; Fig 1; 233pp; English.
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                                                                                           05-JUL-2001;
                                                                                                                           17-JAN-2002
                                                                                                                                                        WO200204493-A2
                                                                                                                                                                                                                                                                                                                                  15-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                ABL39957;
                                                                                                                                                                                                                                                                                                                                                                                              ABL39957 standard; DNA; 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-154920/20
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(UYST-) UNIV STELLEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           844 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGGGGACTACGTGGACCGCTTCTTCAAGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
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                                                                                            2001WO-US021241.
                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                    SEQ ID
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                                                                                                                                                                                                                                                                                                    NO:20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1479;
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                                                                                                                                                                                                                                                     C protein;
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(CHIR )
(UYST-)

CHIRON CORP.
UNIV STBLLENBOSCH.

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RESULT 9
ABL40020
ID ABL4
XX
AC ABL4
XX
DT 15-M
XX
DB Synt
XX
Huma
KW immu
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FM immu
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FM WO20
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FM WO20
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PN WO20
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PN WO20
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PN WO20
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PF 05-J
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PF 05-J
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PF 05-J
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PF 05-J
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PR 05-J
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XX
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XX
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Best Local S
Matches 60
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                                                                                                                        New polynucleotides encoding antigenic HIV Type C polypeptides, useful in applications including DNA immunization or generation of packaging cell lines, particularly in gene therapy.
                                                                                                                                                                                                                                                                                                                                (CHIR )
(UYST-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immunodeficiency virus; type C. Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human immunodeficiency virus type C; antigenic HIV type C immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; v immunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New polynucleotides encoding antigenic HIV Type C polypeptides, useful applications including DNA immunization or generation of packaging cell lines, particularly in gene therapy.
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                                                                                                                                                                                                                              WPI; 2002-154920/20
                                                                                                                                                                                                                                                                               Zur Megede J,
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                                                                                                                                                                                                                                                                                                                                CHIRON CORP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                  STELLENBOSCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polynucleotide sequence SEQ ID NO:99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP; 325 A; 533 C; 461 G; 160 T; 0 U; 0 Other;
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                                                                                                                                                                                                                                                                               Barnett SW,
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                                                                                                                                                                                                                                                                               Rensburg
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The present invention describes expression cassettes comprising polynucleotide sequence encoding a polypeptide comprising immunous polypeptide comprising immunous polynucleotide sequence encoding a polypeptide comprising immunous polypeptide comprising immunous

immunogenic

AIH

Sequence 1494

BP;

325 P 557

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English

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RESULT 10
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                                           The present invention describes expression cassettes comprising a polynucleotide sequence encoding a polypeptide comprising immunogenic HIV type C polypeptides. The expression cassettes comprise any of the HIV type C sequences encoding Gag, Pol, Vif, Vpr, Tat, Rev, Vpu, Env or Nef (I). (I) have immunostimulant activity and can be used in gene therapy. The HIV type C polynucleotides are useful in applications including DNA immunisation, generation of packaging cell lines, and production of HIV Type C proteins. The polynucleotides are particularly useful in gene therapy and DNA immunisation applications. ABL39942 to ABL40054 and ABB06215 represent sequences used in the exemplification of
                                                                                                                                                                                                                                                                   New polynucleotides encoding antigenic HIV applications including DNA immunization or lines, particularly in gene therapy.
                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                           (CHIR )
(UYST-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human immunodeficiency virus; type C. synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human immunodeficiency virus type C; antigenic HIV type C immunogenic; immunisation; gag; pol; vif; vpr; tat; rev; vimmunostimulant; gene therapy; gene; ds.
                                                                                                                                                                                                                                     Claim 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUL-2000; 2000US-00610313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUL-2001; 2001WO-US021241.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic Gag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ABL39972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABL39972 standard; DNA; 1494 BP
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                                                                                                                                                                                                                                                                                                                                                                        Zur Megede J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200204493-A2
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                                present
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Similarity 100.0%; Pred. No. 1.3e-09;
O: Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                           CHIRON CORP.
UNIV STELLENBOSCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCCTTCTTCAAGACC
                                                                                                                                                                                                                                     Fig 22; 233pp; English.
                                   invention
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                                                                                                                                                                                                                                                                                                                                                                          Barnett SW,
                                                                                                                                                                                                                                                                                                                                                                          Engelbrecht S,
                                                                                                                                                                                                                                                                                       Type C polypeptides, useful generation of packaging cell
                                                                                                                                                                                                                                                                                                                                                                           Van Rensburg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C protein; vpu; env;
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Query Match

Score 60; DB 6; Pred. No. 1.3e-09;

Length 1494;

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RESULT 11
ACA03590
ID ACA03
XX
ACA03590
ACA03
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ACA03590
ACA02
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ACA02
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DT 22-M
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DB Synt
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Best Local
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                                                                                                                                                                                                                                                                          The invention describes a synthetic polynucleotide encoding 2 or more immunogenic HIV polypeptides, where at least 2 of the polypeptides are derived from different HIV subtypes. The polynucleotide is useful for immunisation, generation of packaging cell lines, or production of HIV polypeptides. The polynucleotide and its encoded proteins are useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, or for inducing neutralising antibodies against HIV. The gene delivery vector comprising the polynucleotide is also useful for DNA immunisation of, or for generating an immune response (e.g. a humoral or cellular immune response) in, a subject such as a mammal, particularly a human. This sequence encodes a human immunodeficiency virus immunogenic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New synthetic polynucleotides encoding antigenic HIV type B and/or type C polypeptides, useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, especially humans.
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31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349728P.
16-JAN-2002; 2002US-0349793P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunogenic HIV polypeptide; human immunodeficiency virus; HIV; vaccine; gene therapy; packaging cell line; humoral immune response; cellular immune response; gene delivery vector; DNA immunisation; ds.
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                                                                                                                                                                                                                             Sequence 2742 BP; 578 A; 1020 C; 859 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Fig 78; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zur Megede
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003004657-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic DNA ecoding immunogenic HIV peptide #73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACA03590 standard; DNA; 2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUL-2002; 2002WO-US021421.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CHIR ) CHIRON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
  2104
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                                                                                                                    60;
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                                   GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
    GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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llarity 100.0%;
Conservative (
                                                                                                               100.0%; llarity 100.0%; Conservative 0
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                                                                                                             Score 60; DB /; Pred. No. 1.4e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                    285 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                    0 U; 0 Other;
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RESULT 13
ADC13278
ID ADC13
XX
AC ADC13
XX
DT 18-DE

ADC13278

18-DEC-2003 ADC13278;

(first

entry)

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RESULT 12
ACA03524
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문
                                                                    Query Match
Best Local S
                                                         Matches
                                                                                                                                           The invention describes a synthetic polynucleotide encoding 2 or more immunogenic HIV polypeptides, where at least 2 of the polypeptides are derived from different HIV subtypes. The polynucleotide is useful for immunisation, generation of packaging cell lines, or production of HIV polypeptides. The polynucleotide and its encoded proteins are useful as immune responses against HIV in a subject, or for inducing neutralising antibodies against HIV. The gene delivery vector comprising the polynucleotide is also useful for DNA immunisation of, or for generating an immune response (e.g. a humoral or cellular immune response) in, a subject such as a mammal, particularly a human. This sequence encodes a human immunodeficiency virus immunogenic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACA03524 standard; DNA; 2742
                                                                                                                                                                                                                                                                                                                                                                        New synthetic polynucleotides encoding antigenic HIV type B and/or type C polypeptides, useful as immunogenic compositions or vaccines for generating humoral or cellular immune responses against HIV in a subject, especially humans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349728P.
16-JAN-2002; 2002US-0349793P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunogenic HIV polypeptide; human immunodeficiency virus; HIV; vaccine; gene therapy; packaging cell line; humoral immune response; cellular immune response; gene delivery vector; DNA immunisation; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic DNA ecoding immunogenic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zur Megede
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                                                                                                                 Sequence 2742 BP; 578 A; 1020 C; 859 G;
                                                                                                                                                                                                                                                                                                                                              Example 1; Fig 12; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUL-2002; 2002WO-US021421.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CHIR ) CHIRON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2003-221602/21.
                                                         ; 09
                                                                      Similarity
               GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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                                                        Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Barnett
                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SW,
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                                                      Score 60; DB 7; Pred. No. 1.4e-09; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HIV peptide
                                                                                                                      285 T; 0 U; 0 Other;
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                                                                                       Length 2742;
                                                           Indels
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Best Local S
Matches 60
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                                WO2003004620-A2
                                                                                       expression cassette; HIV Gag; Env; Int; Nef; p15RnaseH; Pol; Tat; Rev; HIV type C; gene therapy; vaccine; immunisation; HIV; ds.
                                                                                                                                      DNA of HIV
                                                            Human immunodeficiency virus
                                                                                                                                                                  18-DEC-2003
                                                                                                                                                                                                ADC13241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUL-2001; 2001US-0303192P.
31-AUG-2001; 2001US-0316860P.
16-JAN-2002; 2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New expression cassette comprising a polynucleotide sequence encoding polypeptide including an HIV Gag, Env, Int, Nef, p15RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           expression cassette; HIV Gag; Env; Int; Nef; p15RnaseH; Pol; Tat; Prot; Rev; HIV type C; gene therapy; vaccine; immunisation; HIV; ds.
                                                                                                                                                                                                                             ADC13241 standard; DNA; 2742
                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                packaging cell lines.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 54; 301pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zur Megede J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUL-2002; 2002WO-US021420
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                                                                                                                                                                                                                                                                                                       2104
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                                                                                                                                                                                                                                                                                                                                                              l Similarity
60; Conserv
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                                                                                                                                                                                                                                                                                                                            GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                     GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC 2163
                                                                                                                                                                                                                                                                                                                                                                                                                          2742 BP; 578 A; 1020 C; 859 G; 285 T;
                                                                                                                                   construct GagTatRevNef_C SEQ ID NO 20
                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 60; DB 9; ilarity 100.0%; Pred. No. 1.4e-09; Conservative 0; Mismatches 0;
                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barnett SW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English.
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                                                                                                                                                                                                                             ВÞ
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                                                                                                                                                                                                                                                                                                                                                                                                                            Other;
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16-JAN-2003

Zur Megede J,

Barnett SW,

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Engelbrecht S,

Van

Rensburg

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Best Local :
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31-AUG-2001;
16-JAN-2002;
                                                                05-JUL-2001; 2001US-0303192P
31-AUG-2001; 2001US-0316860P
16-JAN-2002; 2002US-0349871P
                                                                                                                        05-JUL-2002; 2002WO-US021420.
                                                                                                                                                                              WO2003004620-A2
                                                                                                                                                                                                       Human immunodeficiency virus
                                                                                                                                                                                                                                 expression cassette; HIV Gag; Env; Int; Rev; HIV type C; gene therapy; vaccine;
                                                                                                                                                                                                                                                                        DNA of HIV construct GagRTmut_C SEQ ID NO 18
                                                                                                                                                                                                                                                                                                                                                          ADC13239 standard; DNA; 3162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                         (CHIR ) CHIRON CORP. (UYST-) UNIV STELLENBOSCH.
                                                                                                                                                   16-JAN-2003
                                                                                                                                                                                                                                                                                                                                ADC13239;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUL-2002; 2002WO-US021420
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                                                                                                                                                                                                                                                                                                                                                                                                                               850
                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGGCGACTACGTGGACCGCTTCTTCAAGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 100.0%; l Similarity 100.0%; 60; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                             GACATCAAGCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACC
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2001US-0316860P.
2002US-0349871P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STELLENBOSCH
                                                                                                                                                                                                                                                                                                    (first entry)
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                                                                                                                                                                                                                                                                                                                                                            ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 60; DB 9; 1
Pred. No. 1.4e-09;
; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Engelbrecht
                                                                                                                                                                                                                                    Nef; p15RnaseH; Pol; Tat; Prot;
immunisation; HIV; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         285 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 2742;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Van Rensburg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           is useful
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O
                                                                                                                                                                                                                                                                                                                                                                                                                               909
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DR WPI; 2003-221593/21.

XX

New expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Env, Int, Nef, pl5RnaseH, Pol, Tat, Prot, or Rev polypeptide, useful for immunization, or generating PT packaging cell lines.

XX

Prot, or Rev polypeptide, useful for immunization, or generating PT packaging cell lines.

XX

Disclosure; Fig 15; 301pp; English.

XX

The invention relates to a novel expression cassette comprising a polynucleotide sequence encoding a polypeptide including an HIV Gag, Env, CC polynucleotide sequence encoding a polypeptide. The novel cappression cassette can be used to treat HIV type C by gene therapy or used in the development of a vaccine. The gene delivery vector is cadministered intramuscularly, intramucosally, intranasally, subsultaneously, intradermally, transdermally, intravaginally, consumply or intravenously. The expression cassette is useful for immunisation, generating packaging cell lines and producing HIV polypeptides. This polymucleotide sequence represents the DNA of an HIV CC Type C related sequence of the invention.

XX

Sequence 3162 BP; 729 A; 1095 C; 975 G; 363 T; 0 U; 0 Other;
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Search completed: May 28, 2004, 09:49:05 Job time : 29.8049 secs

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Result
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Maximum Match 100%
Listing first 45 summaries
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            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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(without alignments)
5939.155 Million cell updates/sec
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1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*

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				Query M Best Lo Matches	TYPE: DNA ORGANISM: PEATURE: PEATURE INFO OTHER INFO OTHER INFO	CURRENT FI NUMBER OF SOFTWARE: SEQ ID NO 4 LENGTH: 1	TITLE OF INVENTION: IMPROVE TITLE OF INVENTION: OF VIRU FILE REFERENCE: 1621.002 CURRENT APPLICATION NUMBER:	APPLICANT: APPLICANT: APPLICANT:	APPLICANT: APPLICANT: APPLICANT:	APPLICANT: APPLICANT: APPLICANT:	RESULT 1 US-09-475-515-4 ; Sequence 4, Applicat ; Patent No. 6602705 ; GENERAL INFORMATION:		00000000000000000000000000000000000000
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1005 1026	946 GAGACCCTGCTGGTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCCGCCCCCCCAACCCCCAAGACCATCCTGCAAGGCTCTCCGCCOCCCCCCCCCC
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906	826 CCCGTGAGCATCCTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGAC
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765 786	706 GCCACCAGCACCCTGCAGGAGCAGATCGCCTTGGATGACCAGCAACCCCCCCGTGCCCGTG
705 726	646 CAGGCCGGCCCCGTGGCCCCCGGCCAGATGCGCGACCCCCGCGGCAGCGACATCGCCGGC
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1303 CCCAGCCACAAGGGCCGCCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCGCCCCC 1362

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APPLICANT: BARNETT, Susan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
ITILE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
ITILE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 75
LENGTH: 4472
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: 9p160.modUS4.delV1/V2.gag.modSF2
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GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: BARNETT, Susan

APPLICANT: SRIVASTAVA, Indresh

APPLICANT: LIAN, Ying

APPLICANT: LIU, Hong

APPLICANT: GREER, Catherine

APPLICANT: WALKER, Christopher

TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND

TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES

FILE REFERENCE: 1621.002

CURRENT APPLICATION NUMBER: US/09/475,515A

CURRENT FILING DATE: 1999-12-30

NUMBER OF SEQ ID NOS: 90

SEQ ID NO 76
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; TYPE: DNA
; TYPE: DNA
; ORGANISM: Artificial Sequence
; PEATURE:
; OTHER INFORMATION: Description of Artificial Sequence:
; OTHER INFORMATION: gp160.modSF162.delV2.gag.modSF2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 79.6%;
Local Similarity 88.5%;
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                                               GCCGCCGGCACCGGCAACAGCCAGCCAGGTGAGCCAGAACTACCCCCATCGTGCAGAACCTG
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              TTCGGCAGCGGCCCCCTGAGCCAGTAA 1509
                                                       AGCCAGAAGCAGGAGCCCATCGACAAGGAGCTGTACCCCCTGACCAGCCTGCGCAGCCTG
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APPLICANT: LIU, Hong
APPLICANT: GRBER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SOFTWARE: Patentin Ver. 2.0
SOFTWARE: ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence:
OTHER INFORMATION: gp160.modSF162.gag.modSF2
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GENERAL INFORMATION:
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APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
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                                               ATCGAGGAGAAGGCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGC
                                                                                               CAGGGCCAGATGGTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTG
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RESULT 5
US-09-475-515-73
; Sequence 73, Application
; Patent No. 6602705
; GENERAL INFORMATION:
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APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POL
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
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Best Local Similarity
Matches 1351; Conserv
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TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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ZUR MEGEDE, Jan
SRIVASTAVA, Indresh
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                                 CAGATGCTGAAGGACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTG
                                                                      GCCACCCCCAGGACCTGAACACGATGTTGAACACCGTGGGCCGCCAGGCCAGGCCGCCATG
                                                                                                                                         ATCGAGGAGAAGGCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGC
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                  CAGATGCTGAAGGAGACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCGTG
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Pred. No. 9e-170;
0; Mismatches 140;
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RESULT 6
US-09-475-515-7
; Sequence 7, Application US/09475515A
; Patent No. 6602705
; GENERAL INFORMATION:
; APPLICANT: BARNETT, Susan
; APPLICANT: ZUR MEGEDE, Jan
; APPLICANT: STIVASTAVA, Indresh
; APPLICANT: LIAN, Ying
; APPLICANT: LIAN, Ying
; APPLICANT: LIO, Hong
; APPLICANT: GREER, Catherine
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APPLICANT: WALKER, Christopher
ITITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POI
ITITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LENGTH: 2031
; TYPB: DNA
; TYPB: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: HIV-Gag/HCV-core fusion polypeptide
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    GCCACCCCCAGGACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATG
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                                              ACCGTGGCCACCCTGTACTGCGTGCACCAGCGCATCGACGTCAAGGACACCAAGGAGGCC
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                                                                                         CAGATGCTGAAGGAGACCATCAACGAGGAGGCCGCCGAGTGGGACCGCGTGCACCCCCGTG
                                                                                                     CAGATGCTGAAGGACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTG
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Pred. No. 1.8e-169;
0; Mismatches 140;
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Sequence 5, Application US/09475515A;
Patent No. 6602705;
GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: SRIVASTAVA, Indresh
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: HIU, Hong
APPLICANT: GEER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
                                                                                                                                                                                                RESULT 7
US-09-475-515-5
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; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 5
; LENGTH: 1853
; TYPE: DNA
; ORGANISM: Artificial Sequence
; PEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: synthetic
; OTHER INFORMATION: HIV-Gag-protease
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Best Local Similarity 85.1%;
Matches 1299; Conservative
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  CCCGTGAGCATCCTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGAC
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Sequence 78, Application US/09475515A

Patent No. 6602705

GENERAL INFORMATION:
APPLICANT: BARNETT, Susan
APPLICANT: ZUR MEGEDE, Jan
APPLICANT: LIAN, Ying
APPLICANT: HARTOG, Karin
APPLICANT: HARTOG, Karin
APPLICANT: GREER, Catherine
APPLICANT: SELBY, Mark
APPLICANT: SELBY, Mark
APPLICANT: WALKER, Christopher
TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION
TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES
FILE REFERENCE: 1621.002
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US-09-475-515-78
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                                                                                    CURRENT APPLICATION NUMBER: US/09/475,515A
CURRENT FILING DATE: 1999-12-30
NUMBER OF SEQ ID NOS: 90
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 78
LENGTH: 1865
TYPE: DNA
ORGANISM: Artificial S
FEATURE:
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Pred. No. 1.8e-157;
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732 705 672 645 612 585 552

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Query Match 74.1%; Score 1117.8; DB 4; Length 1865; Best Local Similarity 85.1%; Pred. No. 1.8e-157; Matches 1299; Conservative 0; Mismatches 192; Indels 36; Gaps 3; Qy 1 ATGGGCGCCCGCGCCAGCATCCTGCGCGGGGAGAAGCTGGGACAAGTGGGAAAAATCCGC 60	; ORGANISM: Artificial Sequence ; PRATURE: ; OTHER INFORMATION: Description of Artificial Sequence: GP2 US-09-475-515-79	WARE: Patentin Ve D NO 79 IGTH: 1865	REPERENCE: 1621.002 ENT APPLICATION NUMBER: US/09/475,515A ENT FILING DATE: 1999-12-30 ENG SEC ID NOG: 00	ICANT: SELE ICANT: WALH E OF INVENT	ICANT: LIAN, Ying ICANT: LIAN, Ying ICANT: HARTOG, Kari ICANT: LIU, Hong	AL INFORMATION: ALCANT: BARNETT, Susan ACANT: ZUR MEGEDE, Jan ACANT: ZUR MEGEDE, Jan	RESULT 9 US-09-475-515-79 ; Sequence 79, Application US/09475515A	Oy 1483 TTCGGCAGCGCCCCTGAGCCAGTAA 1509		143	CCCAGCCACAAGGGCCGCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCGCCGCCCCCCCC	GAGGGCCACCAGATGAAGGACTGCACCGAGGCCCAGGCCAACTTCCTGGGCAAGATCTGG 130	GGCCACATCGCCAAGAACTGCCGCGCCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAG			1033 CCCGCGGCCACCCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCGGC	973
Db 1033 CCCGCGGCCACCCTGGAGGAGATGATGACCGCCTGCCAGGCGTGGAGCACCCACC	946 GAGACCCTGCTGGTGCAGAACGCCCAACCCCGACTGCAAGACCATCCTGCGCGCGTCT		QY 826 CCCGTGAGCATCCTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGAC 885	Qy 766 GGCGACATCTACAAGCCGTTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGC 825		Qy         646         CAGGCCGGCCCCGTGGCCCCCGGCCAGATGCGCGAACCCCCGCGGCAGACATCGCCGGC         705           II         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			Qy 466 ATCGAGGAGAGGCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGC 525	Qy 406 CAGGGCCAGATGGTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTG 465	Qy 361 GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTG 405	OY 301 CTGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCAGCAGGCAG	Qy 241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGAGGCC 300	QY 181 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTACAAC 240	Qy 121 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCCGGCGGGGCTGCAAGCAGATC 180		TCCGC

Ph 7 ATGGCCCCCGCGCCAGCGTGCTGAGCCGCGAGCTGGAGCTGGAGTGGGAGAAGATCCGC 66  Oy 61 CTGCGCCCCGGCGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGCGAG 120	1 ATGGGCGCCAGCATCCTGCGCGCGCGAGAAGCTGGACAAGTGGGAGAAGATCCGC	<pre>rcription of Artificial r-Gag-polymerase r4.1%; Score 1117.8; r6.1%; Score 107.8;</pre>	; SEQ ID NO 6 ; SEQ ID NO 6 ; LENGTH: 4319 ; TYPE: DNA ; ORGANISM: Artificial Sequence ; FEATURE:	; FILE REFERENCE: 1621.002 ; CURRENT APPLICATION UMBER: US/09/475,515A ; CURRENT FILING DATE: 1999-12-30 ; NUMBER OF SEQ ID NOS: 90 ; NUMBER OF SEQ ID NOS: 90	APPLICANT: SELBY, Mark  APPLICANT: WALKER, Christopher  TITLE OF INVENTION: IMPROVED EXPRESSION OF HIV POLYPEPTIDES AND PRODUCTION  TITLE OF INVENTION: OF VIRUS-LIKE PARTICLES	; APPLICANT: LIAN, ring ; APPLICANT: HARTOG, Karin ; APPLICANT: LIU, Hong ; APPLICANT: GREER, Catherine	BARNET BARNET ZUR MI SRIVAS	RESULT 10 US-09-475-515-6 ; Sequence 6, Application US/09475515A ; Patent No. 6602705		Db 1435 TCTCAGAAGCAGGAGCCGATAGACAAGGAACTGTATCCTTTAACTTCCCTCAGATCACTC 1494  OY 1483 TTCGGCAGCGCCCCTGAGCCAGTAA 1509	Db 1375 CCAGAGCCAACAGCCCCACCAGAAGAGAGCTTCAGGTTTGGGGAGGAGAAAACAACTCCC 1434  Qy 1423 AAGCAGGAGCCCAAGGACCGCGAGCCCTACCGCGAGCCCCTGACCGCCTGCGCAGCCTG 1482	Db 1333 CCTTCCTACAAGGGAAGGCCAGGGAATTTTCTTCAGAGGAGAA 1374  Qy 1363 ACCGTGCCCACCGCCCCCCCCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGCCCC 1422	Db 1273 GAAGGACACCAAATGAAAGATTGCACTGAGAGACAGGCTAATTTTTTTAGGGAAGATCTGG 1332  OY 1303 CCCAGCCACAAGGGCCGCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCC	OY 1243 GAGGGCCAGGATGAAGGACTGCAGCGAGCGCCAGGCCAAGATCTGCGGCAAGATCTGG 1302	Db 1153 CAGCGCGGCAACTTCCGCAACCAGCGGAAGACCGTCAAGTGCTTCAACTGCGGCAAGGAG 1212  OY 1183 GGCCACATCGCCAAGAACTGCCGCGCCCCCCCGCAAGAAGGGGCTGCTGGAAGTGCGGCAAG 1242	DD 1093 AAGGCCCGCGTGCTGGCCGAGGCGATGAGCCAGGTGACGAACCCCGGCGACCATCATGATG 1152  QY 1123 CAGAAGAGCAACTTCAAGGGCCCCCCGGCGCAACGTCAAGTGCTTCAACTGCGGCAAGGAG 1182
Qy 1123 CAGAAGAGCAACTTCAAGGGCCCCCGGGCGAACGTCAAGTGCTTCAACTGCGGCAAGGAG 1182	1066 AAGGCCCGCGTGCTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGATG	967 GAGACCCTGCTGGTGCAGAACGCCAACCCCGACTGCAAAGACCATCCTGAAGGCTCTCCGC 1026  Qy 1006 CCCGGCGCCACCCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCAC 1065	Qy 886 CGCTTCTTCAAGACCCTGCGCGCGCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACC 945	.Qy 826 CCCGTGAGCATCCTGGACATCCGCCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGAC 885	QY 766 GGCGACATCTACAAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGC 825	QY 706 GCCACCAGCACCCTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGCCGTG 765	Qy 646 CAGGCCGGCCCGTGGCCCCGGGCCAGATGCGCGGACCCCCGGGCAGCGACATCGCCGGC 705	OY 586 CAGATGCTGAAGGACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCACCCCGTG 645	Qy 526 GCCACCCCCAGGACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATG 585	Qy 466 ATCGAGGAGAAGGCCTTCAGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGC 525	Qy 406 CAGGGCCAGATGGTGCACCAGGCCATCAGCCCCGCACCCTGAACGCCTGGGTGAAGGTG 465	Oy 361 GCCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTG 405	Qy 301 CTGGACAAGATCGAGGAGGAGGAGAACAAGTCCCAGCAGAAGACCCAGCAGGCCAAGGAG 360	CGACACCAAGGAGGCC            	Qy 181 ATGAAGCAGCTGCAGCCCGCCTGCAGACCCGAGGGGCTGCGCAGCCTGTACAAC 240	21 CTGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATC

Db 127 CTGGAGCGCTTCGCCGTGAACCCCGGCCTGCTGGAGAGCCAGCGAGGGCTGCCGCAGATC 186  Oy 181 ATGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCAGCCTGCAGACCGAGCCTGTACAAC 240	OY  61 CTGCGCCCCGGCGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGAGC 120	1 ATGGGCGCCCGCGCCAGCATCCTGCGCGGCGAGAAGCTGGACAAGTGGGAGAAGATCCGC 60	Query Match Best Local S	PEATURE: OTHER INFORMA OTHER INFORMA 0THER INFORMA 5-09-475-515-9	SEQ ID NO 9 LENGTH: 1268 TYPE: DNA	CURRENT APPLICATION NUMBER: US/09/475,515A CURRENT FILING DATE: 1999-12-30 NUMBER OF SEQ ID NOS: 90 CORTUNES. Batentin Ver 2.0		APPLICANT: HARTOG, Karin APPLICANT: LIU, Hong APPLICANT: GREER, Catherine APPLICANT: SKIRY Mark	APPLICANT: BARNE APPLICANT: BARNE APPLICANT: SRIVA	ស្រុ	Db 1489 TTTGGCAACGACCCCTCGTCACAGTAA 1515	Db 1429 TCTCAGAAGCAGGAGCCGATAGACAAGGAACTGTATCCTTTAACTTCCCTCAGATCACTC 1488  OY 1483 TTCGGCAGCGCCCCCTGAGCCAGTAA 1509	Db 1369 CCAGAGCCCAACAGCCCCACCAGAAGAGAGCTTCAGGTTTGGGGAGGAGAAAACAACTCCC 1428  Qy 1423 AAGCAGGAGCCCAAGGACCGCGAGCCCTACCGCGAGCCCCTGACCGCCCTGCGCAGCCTG 1482	1363 ACCGTGCCACCGCCCCCCCCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGCCCCC 142	Qy 1303 CCCAGCCACAAGGGCCGCCCCGGCAACTTCCTGCAGAACCGCAGCGAGCCCGCCC	OY 1243 GAGGCCACCAGATGAAGGACTGCACCCAGGCCAACTTCCTGGGCAAGATCTGG 1302	
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Sequence 2, Application US/09552950

Patent No. 6541248

GENERAL INFORMATION:
APPLICANT: Oxford Biomedica (UK) Limited APPLICANT: Oxford Biomedica (UK) Limited TITLE OF INVENTION: Anti-Viral Vectors FILE REFERENCE: 674524-2004

CURRENT APPLICATION NUMBER: US/09/552,950

CURRENT FILING DATE: 2000-04-20

NUMBER OF SEQ ID NOS: 22

SOPTWARE: PatentIn Ver. 2.1

SEQ ID NO 2
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GGCCCCGTGGCCCCGGCCAGATGCGTGAGCCACCGCGGCAGCGACATCGCCGGACACCT
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                                            AAGCAGGAGCCGACCGCCAGGGCACGGTGTCCTTCAACTTCCCCTCAGGTCACGCTTTGGC
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RESULT 13
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US-09-552-950-5
; Sequence 5, Application US/09552950
; Patent No. 65441248
; GENERAL INFORMATION:
APPLICANT: Oxford Biomedica (UK) Limited TITLE OF INVENTION: Anti-Viral Vectors FILE REFERENCE: 674524-2004
; CURRENT APPLICATION NUMBER: US/09/552,950
; CURRENT FILING DATE: 2000-04-20
; NUMBER OF SEQ ID NOS: 22
; SOFTWARE: PatentIn Ver. 2.1
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Best Local
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OTHER INFORMATION: Description: -09-552-950-5
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                                                                         ATCTACAAACGCTGGATCATCCTGGGCCTGAACAAGATCGTGCGCATGTATAGCCCTACC 1947
                                                                                  ATCTACAAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCGTG
                                                                                                                                 AGCACCCTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGCCCGTGGGCGAC
                                                                                                                                                                                                         CTGAAGGAGACCATCAATGAGGAGGCTGCCGAATGGGATCGTGTGCATCCGGTGCACGCA 1767
                                                                                                                                                                                                                      CTGAAGGACACCATCAACGAGGAGGCCGCCGAGTGGGACCCGCTGCACCCCGTGCAGGCC
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                                                                                                                   AGTACCCTTCÁGGAACÁGATCGGCTGGATGACCAACAACCCCATCCCGGTGGGAGAA 1887
                                                                                                                                                                                                                                                                                                                                                                                   GACACCOGACACAGCAACCAGGTCAGCCAGAACTACCCCATCGTGCAGAACATCCAGGGG
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Pred. No. 4.6e-129;
0; Mismatches 316;
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APPLICANT: The Government of the United States of America, as TITLE OF INVENTION: MOLECULAR CLONES WITH MUTATED HIV GAG/POL, SIV TITLE OF INVENTION: SIV ENV GENES
FILE REFERENCE: 2026-4287US1 HIV GAG/POL, SIV GAG & ENV CURRENT APPLICATION NUMBER: US/09/872,733A
CURRENT FILING DATE: 2001-06-01
PRIOR APPLICATION NUMBER: PCT/US/00/34985
PRIOR FILING DATE: 2000-12-22
PRIOR PILING DATE: 2000-12-22
PRIOR APPLICATION NUMBER: 60/173,036
PRIOR FILING DATE: 1999-12-23
NUMBER OF SEQ ID NOS: 19
SOPTWARE: Patentin Ver. 2.1
SEQ ID NO 6
LENGTH: 8366
TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
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US-09-872-733A-6
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Query Match 48.8%;
Best Local Similarity 69.5%;
Matches 1057; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6, Application US/09872733A Patent No. 6656706
                                                                                      OTHER INFORMATION: Description of Artificial Sequence: DNA sequence OTHER INFORMATION: of the construct pCMVgagpolBNKan containing a CMV OTHER INFORMATION: promoter, a HIV gag/pol gene and a kanamycin OTHER INFORMATION: resistance gene
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Pred. No. 3.6e-101;
0; Mismatches 434;
                                  Length 8366;
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Db 181 AT	1072 CGCGTGCTGGCCGAGGCGATGAGCCAGGCCAACAGCGTGAACATCATGATGCAGAAG 1128
Qy 181 AT	1790 GCTACACTAGAAGAAATGATGACAGCATGTCAGGGAGTAGGAGGACCCGGCCATAAGGCA 1849
Db 121 CT	1012 GCCACCCTGGAGGAGATGATGACCGCCTGCCAGGGCGTGGGCGGCCCCGGCCACAAAGGCC 1071
Оу 121 СТ	1730 TIGITGGTCCAAAATGCGAACCCAGATTGTAAGACCATCCTGAAGGCTCTCGGCCCAGCG 1789
Db 61 TT	952 CTGCTGGTGCAGAACGCCAACCCCGACTGCAAGACCATCCTGCGCGCTCTCGGCCCCGGC 1011
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<b>-</b>	AGCHII CIQQACA IANGACARDACCARDACCARDACCARDACARDACCARDACA
hes 102	832 AGCATCCTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTC 891
Query Match Best Local Sim	
; OTHER INFORM US-09-184-418C-8	
TYPB: ORGANI FEATUR	712 AGCACCCTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCCGTGCCCGTGGGCGAC 771
# 6	1430 GGGCCTATTGCACCAGGCCAGATGAGAGAACCAAGGGAAGTGACATAGCAGGAACTACT 1489
CURRENT FILING	652 GGCCCGTGGCCCCGGCCAGATGCGCGAACCCCCGCGGCACAATCGCCGGCGCCACC 711
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L INF	532 CCCCAGGACCTGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATG 591
US-09-184-418C-8 ; Sequence 82, A ; Patent No. 649	
OLT 15	472 GAGAAGGCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACC 531
Db 2252 AA	412 CAGATGGTGCACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAG 471
Оу 1489 АС	GACACAGACACAGCAATCAGGTCAGCCAAAATTACCCTATAGTGCAGAACATCCAGGGG I
Db 2192 AA	CAAGGAGGCCGACGGCAAAGGTGAGCCAGAACTACCCCCATCGTGCAGAACCTGCAGGGC
Оу 1429 СА	μ
2132	53
0y 1369 CC	
2202	241 ACCGTGGCCACCCTGTACTGCGTGCACGCCGTCGACGTCCGCGACACCCAAGGAGGCC 300
2030	50 CTGGGACAGCTACAACCATCCCTTCAGACAGGATCAGAGGAGGAGCTTCGATCACTATACAAC 1
Qy 1249 CA	81 ATGAAGCAGCTGCAGCCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTACAAC 2
	121 CTGGAGGGCTTCGCCCTGAACCCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGATC 180 
Qy 1189 AT	10 FUNDALING CONTRACTOR CONTRACTO
Db 1910 GG	61 CTGCGCCCCGGCGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGCGAG 120
Qу 1129 АĢ	
Db 1850 AG	ATGGGCGCCCGCGCAGCATCCTGCGCGGCGAGAAGCTGGACAAGTGGGAGAAGATCCGC 6

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Shaw, George
VENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
VENTION: IMMUNODEFICIENCY VIRUS TYPE 1
NCE: D6287
LICATION NUMBER: US/09/184,418C
LICATE: 1999-11-02
BQ ID NOS: 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    82
Application US/09184418C
                                                                                                                                                                                                                                                                        48.7%; Score 734.2; DB 4; milarity 69.0%; Pred. No. 8.5e-101; Conservative 0; Mismatches 458;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MATION: isolate=96ZM751.3; gene=gag
82
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Gao, Feng
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                                                                   IGGAAAGATTTGCACTTAACCCTGGCCTTTTAGAGACATCAGAAGGCTGTAAACAAATA
                                                                                                                                         TAAGGCCAGGGGAAAAAAGCACTATATGATGAAACACTTAATATGGGCAAGCAGGGAG
                                                                                                                                                           TGCGCCCCGGCGGCAAGAAGAAGCACTACATGCTGAAGCACCTGGTGGGGCCAGCCGCGAG
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	1441 CGCGAGCCCTACCGCGAGCCCTGACCGCCCTGCGCAGC 1479	Ş
1439	1380 CCAGCAGAGAGCTTCAGGTTCGAGGAGACAACCCCTGCCCCGAGGCAGGAGCAGAAAGAC 1439	뮰
1440	1381 CCCGCCGAGAGCTTCCGCTTCGAGGAGACCACCCCCGCCCCCAAGCAGGAGGCCCAAGGAC 1440	Ş
1379	1320 CCGGGGAACTTCCTTCAGAACAGACCAGACCAGCCCAGC	문
1380	1321 CCCGGCAACTTCCTGCAGAACCGCAGCGAGCCGGCCCGCCC	Ş

Search completed: June 1, 2004, 14:13:31 Job time : 150 secs

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Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD

clade; Panicoideae; Andropogoneae; Zea.

1 (bases 1 to 933)

Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T.,

Resnick, A., Fraser, C.M., Yuan, Y., San Miguel, P., Ma, J. and
                                               Maize Genomics Consortium
Unpublished (2003)
Other GSSs: PUHIJ70TD
Contact: Cathy Whitelaw
                                                                                                                                                                    CC391778 933 bp DNA linear GSS 19-M PUHIJ70TB ZM_0.6_1.0_KB Zea mays genomic clone ZMMBTa458K20, genomic survey sequence.
CC391778
       9712 Medical Center Drive, Rockville, MD 20850, USA
Tel: 301-838-5843
Fax: 301-838-0208
Email: whitelaw@tigr.org
                                                                                                                                                             CC391778.1 GI:30871868
Seq primer: TR
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CG351928
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Result No.

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Dickson, M.,

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CD500131 1219 bp mRNA linear BST 12-CDA43-COB.yld-s SHGC-CDA Gasterosteus aculeatus cDNA clone CDA43-COB 3', mRNA sequence.
CD500131 CD500131.1 GI:31427162
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Best Local Similarity
Matches 373; Conserv
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Contact: Kingsley, DM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gasterosteus aculeatus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Gasterosteiformes;
Gasterosteidae; Gasterosteus.
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Stanford University School of Medicine
Beckman Center B300, 279 Campus Drive, Stanford,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kingsley, D.M., Peichel, C., Balabahdra, S., Grimwood, J., Schmutz, J. and Myers, R.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RST.

Gasterosteus aculeatus (three spined stickleback)
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                                                                            GGGC---CCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCAAGACCCTGC---G
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                                         CGCCCTGCTCAACGGCTCGCTGGGCGACTACGGCGGCGGCTACGGCGACGCCCTGCTCAA
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/clone_lib=_SHGC-CDA*
/note=_Wector: lambda ZAP Express/pBK-CMV; Site_1: EcoR1
(5' adaptor); Site_2: XhoI (3' linker primer); The mixed
organ cDNA library was generated using the ZAP-cDNA method
by Stratagene. First strand cDNA synthesis was primed with
a a 50 bp linker primer containing an oligo dT sequence
preceded by a synthetic XhoI site. 5 prime adaptors were
used containing an EcoR1 cohesive end. The finished cDNAs
were inserted in to the ZAP express vector
unidirectionally in the sense orientation with respect to
the lac2 promoter of pBK-CMV. An amplified library was
prepared from approximately 3 million primary clones in
the lambda ZAP Express vector. In vivo excision was then
used to generate individual pBK-CMV phagemid clones for
EST sequencing.*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /tissue_type="heads and internal organs combined"
/dev_stage="adult"
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/strain="Salinas river,
/db_xref="taxon:69293"
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Pred. No. 1.7;
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                                                                                                                                                                                           Sequences have been trimmed quality sequence with phred Seq primer: SK primer.
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Anderson,O.D., Akhunov,B., Chao,S., Crossman,C., Deal,K.,
Anderson,O.D., Akhunov,B., Chao,S., Crossman,C., Deal,K.,
Dvorak,J., Lazo,G.R., Pham,J., Rausch,C.J., Wilson,C. and Woo,J.
The structure and function of the expressed portion of the wheat
genomes - Salt-stressed root cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BQ744212 749 bp mRNA linear BST WHE4113_A01_A01ZS Wheat salt-stressed root cDNA library action cDNA clone WHE4113_A01_A01, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                   Contact: Olin Anderson
US Department of Agriculture, Agriculture Research
West Area, Western Regional Research Center
BOO Buchanan Street, Albany, CA 94710, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Triticum aestivum (bread wheat)
Triticum aestivum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished (2002)
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BQ744212.1 GI:21890999
                                                                                                                                                                                                                                                                                  Email: oandersn@pw.usda.gov
                                                                                                                                                                                                                                                                                                              Pax: 5105595818
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/organism="Triticum aestivum"
/mol_type="mRNA"
/cultivar="Chinese Spring"
/db_xref="taxon:4565"
/clone="WHE4113_A01_A01"
                                                                                                                                                                       Location/Qualifiers
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//lab_host="B. coli SOLR"
//clone_lib="Wheat salt-stressed root cDNA library"
//clone_lib="Wheat salt-stressed root cDNA library"
//note="Vector: Lambda Uni-ZAP XR, excised phagemid
pBluescript SK(-); Site_l: BCoRI; Site_2: XhoI; Hydroponic
pBluescript SK(-) both types of treatment were collected
separately at University of California, Davis (E. Akhunov
and K. Deal in J. Dvorak's Lab). Total RNA was prepared
separately from the two samples (12h and 7day treatments),
and equal amount of RNA was then pooled. PolyA RNA was
purified from the pooled RNA, a cDNA library was made, and
the cDNA clones were in vivo excised to give pBluescript
SK(-) phagemids in J. Dvorak's lab (E. Akhunov, J. Dvorak)
at the University of California, Davis. Colony plating,
plasmid DNA preparations and DNA sequencing were performed
in the OD Anderson lab (all other authors)."
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Contact: Muller Miklos
Laboratory of Biochemical Parasitology
The Rockefeller University
1230 York Avenue, New York, NY 10021, USA
Email: mmuller@rockvax.rockefeller.edu
Std Error: 0.00
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mastigamoeba balamuthi
Mastigamoeba balamuthi
Eukaryota; Pelobiontida; Mastigamoebidae; Mastigamoeba
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rockefeller.0.42 Mastigamoeba balamuthi lambda ZAP II Library Mastigamoeba balamuthi cDNA similar to vacuolar ATP synthase subunit B (BC 3.6.1.3), mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The analysis of 100 genes supports the grouping of three highly divergent amoebae: Dictyostelium, Entamoeba, and Mastigamoeba Proc. Natl. Acad. Sci. U.S.A. 99 (3), 1414-1419 (2002)
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                                                                                                                                                                  GCCAGCCCATCAACCCGTACAAGCGTGTGTÁCCCCGAGGAGATGÁTCCAGACGGGCATCA
                                                                                                                                                                                                                                                                                                  ACACCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGAGACACCAAGGA--
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                                                                                                                                                                                            AGGAGGCCGACGCAAGGTGAGCCCAGAACTACCCCCATCGTGCAGAACCTGCAGGGCCAGA
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/mol_type="mRNA"
/strain="ATCC 30984"
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'note="syn: Phreatamoeba
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Pred. No. 2.4;
0; Mismatches 756;
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RST
Triticum aestivum
Triticum aestivum
                                                  aestivum cDN
CK215205
CK215205.1
                                                                              CK215205 746
FGAS027158 Triticum aestivum aestivum cDNA, mRNA sequence.
                                                                                                                                                                                                          AGGAGCCCAAGGA 1439
                                                                                                                                                                                                                                                                 GCGACATCTACCAGTCGCTCGACATCGCCTGGAGCCTCTGCG----CCAGTTCCCCAAGG
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                                                                                                                                                                                    AGGAGCACCAGTA 1518
                                                      GI:39621309
                         (bread
                         wheat)
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FGAS: Library
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6 CAP GATE 1 Triticum
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1329 1246 1269 1186 1209

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REFERENCE
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Contact: Wm L Crosby
Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          University of Saskatchewan, Department of Computer Science 1C101 Engineering Building, 57 Campus Drive, Saskatoon, Saskatchewan, S7N 5A9, Canada Tel: 306 966 1769

Pax: 306 966 2033
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1 (bases 1 to 746)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: fgas_ests@cs.usask.ca
This sequence is the direct result of the Phred (default parameters). It is the raw identification of the high quality insert
TCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGAACCCCAGCAGGCCAAGGAGGCCCGACGGCA 370
                                                                                                                                                      CCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACAACCAAGGAGGCCCCTGGACAAGA 310
                                                                                            CCCTCCTCGCCACCGCGCTCGCCATCCCCGACGACGACCCATCTTGGCCATGGACATCA
                                                                                                                                                                                                                TGCTGCTCAAGCTCATCGGCGCCAAGAAGACCATGGAGATCGGCGTCTACACCGGGTACT 611
                                                                                                                                                                                                                                                                           TGCAGCCCGCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTACAACACCGTGGCCA 250
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  region [13,662].
te: L6B016 row: K column: 15.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone libs Triticum aestivum FGAS: Library 6 CAP GATE 1"
/notes—Torgan: Crown and leaf; Vector: pCMV.SPORT6; Crown
(50%) and leaf (50%) tissues from wheat cultivar Norstar
after short exposure times to low temperature in the light
and in the dark. 12 mRNA populations were combined before
constructing the library. The first 6 populations: After 7
days of growth at 20Cs from wheat cultivar Norstar after
short exposure times to low temperature in the light and
in the dark. 12 mRNA populations were combined before
constructing the library. The first 6 populations: After 7
days of growth at 20C, wheat plants were transferred to 4C
in the light. 1cm crown sections and green leaf tissu were
separately harvested after 1, 3, and 6 hours of low
temperature exposure. The last 6 populations: After 7 days
of growth at 20C, wheat plants were transferred to 4C in
the dark. 1cm crown sections and green leaf tissu were
separately harvested after 1, 3, and 6 hours of low
temperature exposure. First strand synthesis in this
library was done in the presence of methylated dCTP
thereby protecting from internal cleavage with NotI. In
addition, this library used a primer for second strand
synthesis that annealed to an artificial sequence (RNA
oligo) added before first strand synthesis. Therefore when
sequences from EST generated from this library will be
masked for vector and adaptor sequences, an additional
masking step will have to be included to mask this RNA
oligo that is common to all clones (sequence
cgacTGGAGCACCACGACGTGGACTGAACTGGACTGAAGAGAAAA)."
                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Triticum aestivum"
/mol_type="mRNA"
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49.7%;
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                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                             Score 80.2; DI
Pred. No. 2.3;
                                                                                                                                                                                                                                                                                                                                     Mismatches 258;
                                                                                                                                                                                                                                                                                                                                                                                               DB 14;
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                                                                                                                                                                                                                                                                                                                                       Indels
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894 CAAGACCCTGCGCGCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCT 953

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                                                                                                                                                                                                                                                                                                                                                                                                                     Email: segref@genoscope.cns.fr, Web: www.genoscope.cns.fr
Library was constructed by Life Technologies, a division of
Invitrogen. Contact: Feng Liang Email: fliang@lifetech.com URL
http://fulllength.invitrogen.com/ InVitroGen Corporation 1600
Faraday Avenue Genoscope sequence ID: CS0DI015CA02NP1.
Location/Qualifiers
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/clone="CSODI015YB03"
/tissue_type="PLACENTA COT 25-NORMALIZED"
/clone_lib="Homo sapiens PLACENTA COT 25-NORMALIZED"
/clone_Tist strand cDNA was primed with a NotI-oligo(dT)
/note="1st strand cDNA was primed with a NotI-oligo(dT)
primer. Five prime end enriched, double-strand cDNA was
digested with Not I and cloned into the Not I and EcoR V
sites of the pCMVSPORT 6 vector. Library was normalized."
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/mol_type="mRNA"
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                               Submitted (25-APR-2002) Maize Mapping Project, University of Missouri, Columbia, MO 65211, USA

If you are interested in getting corresponding physical clones, these are publicly available from ZmDB and may be found by BLAST searching at MSL, maizemap.org; ZmDB, www.zmdb.iastate.edu; TIGR, www.tigr.org; or NCBI, www.ncbi.nlm.nih.gov. When the source of t maize cDNA sequences is either Virginia Walbot, Stanford or Pat Schnable, Iowa State, then clones may be requested from ZmDB:
                                                                                                                                                                                                                                                               Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.
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_lib="Maize Mapping Project/DuPont Cornsensus
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TCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCAGGACC CCGACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATGGTGC TGGACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCCAGCAGGCCAAGGAGG TGAAGCAGCTGCAGCCCGCCCTGCAGACCGGCAGCAGCCTGCGCAGCCTGTACAACA TGGAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATCA CCGTGGCCACCCTGTACTGCGTGCACGCCGGCATCGAGGTCCGCGACACCAAGGAGGCCC AGGAGGTGAACGCCATGGACCCGCTGCTGAAGCCGAAGCAGGACAGGTACGCGCTCCGCA TCGAGGCCGCCGATCATGGAGCACATCCTGGATGGCAGCTCCTTCATGAAGCACGCCA CCGTCGCCAACATCGGCAAGCTCATGTTCGCCCAGTTCTCCGAGCTGGTCAACGAGTTCT ACAACAACGGGCTGACCTCCAACCTGGCGGGCAGCCGCAACCCGAGCCTGGACTACGGGT AGCGAGAGGTCAACTCGGTCAACGACAACCCTGTCATCGACGTCCACCGTGGCAAGGCGC CGTCGCCGCAGTGGCTCGGCCCCCAGATCGAGGTCATCCGCGCCGCCCACCAAGTCCATCG TGTACGGGTACTACGACGACCCCTGCAGCGCCAACTCGCCCCTGATGAAGAAGATCCGGG AGACCCTGCGCGCGAGCAGGCCACCCAGGACGTGAAGAACTGGATGACCGAGA-----ACCTCCACÁGCGCGCGCTTCAGCGÁGAAGGCCCTGCTCACCGCCATCGACCGCGAGGCGG TCCTGGACATCCGCCAGGGCCCCAAGGAGCCCTTCCGCGACTACGTGGACCGCTTCTTCA CCGTCAAGAGCTGCGTGATGGCGGTGGCCAGGAAGGTGCTGACCACCAGCCTCGGCGGCG ACAAGCGGTGGATCATCCTGGGCCTGAACAAGATCGTGCGGATGTACAGCCCCCGTGAGCA ACATIGGTCGCGCTGTGCCAGGCCGTGGACCTGCGCCACCTCGAGGAGAACCTCAAGAGCG CCCTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCGTGCCCGTGGGGGACATCT TCGTCTCCGCCAGGAAGACCGCCGAGGCGGTGGACATCCTCAAGCTCATGTCGTCCACGT CCATCACCAACCACGTCCAGAGCGCGGAGCAGCACAACCAGGACGTGAACTCCCTCGGCC TCAAGGGCACCGAGATCGCCATGGCGTCCTACTGCTCCGAGCTCCAGTACCTGGCCAACC TGAACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAGGACA ACCAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGGCCT /note="this sequence is part of a project of BST assemblies resulting from the application of public contigs to seed DuPont contigs; this resource was assembled by DuPont as part of a collaboration for the overgo addressing of BACs in conjunction with the Maize Mapping Project" 0 Score 79.8; Pred. No. 3. Mismatches DB 11; 617; Indels Length 15; Gaps 1486 835 1426 1366 109 1186 541 481 1066 421 1006 946 988 241 826 181 1606 949 895 775 715 1306 655 1246 361 301

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       University of Saskatchewan, Department of Computer Science
1C101 Engineering Building, 57 Campus Drive, Saskatoon,
Saskatchewan, S7N SA9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
Email: fgas_ests@cs.usask.ca
This sequence is the direct result of the Base calling software
This sequence is the direct result of the Base calls. To aid in the
identification of the high quality insert the software Lucy
(default parameters) has been run on this sequence. Lucy identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pooideae; Triticeae; Triticum.

1 '(bases 1 to 1126)

Allard, F., Crosby, W.L., Danyluk, J., Budes, F., Frick, M., Gaudet, D., Allard, F., Crosby, W.L., Danyluk, J., Budes, F., Frick, M., Gaudet, D., Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A., Links, M.G., McCarthy, B.L., Monroy, A., Muzak, I., Nilson, D., Penniket, C., Roach, J.L. and Sarhan, F.

Punctional Genomics of Abiotic Stress In Wheat and Canola Crops Unpublished (2003)
Contact: Wm L Crosby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plate:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Triticum aestivum (bread wheat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aestivum cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CK211108 1126 bp FGAS022942 Triticum aestivum FGAS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CK211108.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Triticum aestivum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          region [12,750].
te: L6B001 row: A column:
/clone lib="Triticum aestivum PGAS: Library 6 CAP GATE 1"
/note="Organ: Crown and leaf; Vector: pCMV.SPORT6; Crown
(50%) and leaf (50%) tissues from wheat cultivar Norstar
after short exposure times to low temperature in the light
and in the dark. 12 mRNA populations were combined before
constructing the library. The first 6 populations: After 7
days of growth at 20Cs from wheat cultivar Norstar after
short exposure times to low temperature in the light and
in the dark. 12 mRNA populations were combined before
constructing the library. The first 6 populations: After 7
days of growth at 20, wheat plants were transferred to 4C
in the light. 1cm crown sections and green leaf tissu were
                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:4565"
                                                                                                                                                                                                                                                                                                                                                                                          /organism="Triticum aestivum"
                                                                                                                                                                                                                                                                                                                                                                                                                         l. .1126
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6 CAP GATE 1
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Triticum
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Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 GAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATCATG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           285;
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Similarity 48.1%;
CACAAGATCGACTTCCGCGAGGGCCCCGGCGCTGCCGGTGCTGGACGCGCTGCTGGAGGAC
                                                                                                                              GACGGCAAGGTGAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATGGTGCAC
                                                                                                                                                                                                                                                                              GACATCAACCGCGAGAACTACGAGCTGGGGCTGCCGTGCATCGAGAAGGCCGGCGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                      GACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCAGCAGGAGGCCAAGGAGGCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCAACATGCTGCTCAAGCTCATCGGCGCCAAGAAGACCATGGAGATCGGCGTCTACACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 separately harvested after 1, 3, and 6 hours of low temperature exposure. The last 6 populations: After 7 days of growth at 20C, wheat plants were transferred to 4C in the dark. 1cm crown sections and green leaf tissu were separately harvested after 1, 3, and 6 hours of low temperature exposure. First strand synthesis in this library was done in the presence of methylated dCTP thereby protecting from internal cleavage with NotI. In addition, this library used a primer for second strand synthesis that annealed to an artificial sequence (RNA oligo) added before first strand synthesis. Therefore when sequences from RST generated from this library will be masked for vector and adaptor sequences, an additional masking step will have to be included to mask this RNA oligo that is common to all clones (sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGACTGGAGCACGAGGACACTGACATGGACTGAAGGAGTAGAAA)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 78.4; DB 14; Length 1126; Pred. No. 4; 0; Mismatches 301; Indels 6;
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           464
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ACCESSION
VERSION
KEYWORDS
SOURCE
                                                               RESULT 9
CK163121
LOCUS
DEFINITION
ORGANISM
Triticum aestivum Triticum aestivum
                                           CK163121
                                                                 CK163121
FGAS015739 Triticum
                                 CK163121.1 GI:38993028
           (bread wheat)
                                                  1064 bp
m aestivum FGAS:
A sequence.
                                                                   Library
                                                                 linear BST 05-DEC-2003
4 Gate 8 Triticum
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286 604 346 544 403 484 463 424

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GCCCCCGGCCAGATGCGCGACCCCCCCGCGGCGACATCGCCGGCGGCGACCA 712

CGCTCCTACCGCGACTTCGTCCTCGACCTCAACAAGGCCCTCGCCGCCGACCAGCGCGTC 

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GAGATOTGOCAGOTOCOCOTOGGOGACGOCATOACOCTOTGOCGOCGOCOA 175

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AGCCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGCGCCACCCCCCAGGACCTG 543

GAGGCCAACCACGGCACCTTCGACTTCGTCTTCGTGGACGCCGACAAGGACAACTACCTC

404

CAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGGCCTTC 483

AACACGATGTTGAACACCGTGGGCGGCCACCAGGCCGCCATGCAGATGCTGAAGGACACC

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287

AACTACCACGAGCGCCTCATGAAGCTCGTCAAGCTCGGCGGCCTCCTCGGCTACGAC---

AACACGCTCTGGAACGGCTCCGTCGTGCTCCCCGCCGACGCCCCATGCGCAAGTACATC

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Matches

Local

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REPERENCE
AUTHORS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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                                                   424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124 GAGGGCTTCGCCCTGAACCCCCGGCCTGCTGGAGACCGCCGAGGGGCTGCAAGCAGATCATG 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  284;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Allard, F., Crosby, W.L., Danyluk, J., Budes, F., Frick, M., Gaudet, D., Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A., Links, M.G., McCarthy, B.L., Monroy, A., Muzak, I., Nilson, D., Penniket, C., Roach, J.L. and Sarhan, F. Functional Genomics of Abiotic Stress In Wheat and Canola Crops Unpublished (2003)
Contact: Wm L Crosby
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           University of Saskatchewan, Department of Computer Science 1C101 Engineering Building, 57 Campus Drive, Saskatoon, Saskatchewan, S7N 5A9, Canada Tel: 306 966 1769
Fax: 306 966 2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae; Triticeae; Triticum.

1 (bases 1 to 1064)
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This sequence is the direct result of the
Phred (default parameters). It is the raw
identification of the high quality insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bioinformatics
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCAGCTGCAGCCCCTGCAGACCGGCACCGAGGAGCTGCGCAGCCTGTACAACACC 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGATCACCGCCAACCCCATGGAACCTGATGACGACGTCGGCGGACGAGGGCCAGTTC 341
                                                 CAGGCCATCAGCCCCCGCACCCTGAACGCCTGGGTGAAGGTGATCGAGGAGAAGGCCTTC 483
                                                                                                                                                                          GACGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGGCCAGATGGTGCAC 423
                                                                                                                                                                                                                                                                                                   GACAAGATCGAGGAGGAGCAGAACAAGTCCCAGCAGAAGACCCCAGCAGGCCAAGGAGGCC 363
                                                                                                                                                                                                                                                                                                                                                                                                                       GIGGCCACCCTGTACTGCGTGCACGCCGCCATCGAGGTCCGCGACACCCAAGGAGGCCCTG 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCAÁCATĞCTĞCTCAAGCTCATCGGCĞCCAAGAAĞACCATĞGAGATCGGCGTCTACACC
GAGGCCAACCACGGCACCTTCGACTTCGTCTTCGTGGACGCCCGACAAGGACAACTACCTC
                                                                                                                                                                                                                                                                                                                                                              GGCTACTCCCTCGCCACCGCGCTCGCCATCCCCGACGACGCACCATCTTGGCCATG
                                                                                                                                                                                                                                        GACATCAACCGCGAGAACTACGAGCTGGGGCTGCCGTGCATCGAGAAGGCCGGCGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1%; ilarity 48.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone lib="Triticum aestivum PGAS: Library 4 Gate 8"
/note="Torgan: Crown and leaf; Vector: pCMV.SPORT6; Aerial
parts (crown and leaf) of wheat cultivar Norstar during
dehydration stress. 8 mRNA populations were combined
before constructing the library. The first four come from
removing plants from vermiculite (7 day old plants) and
incubating them at 20C on the bench without water for 1,
2, 3 and 4 days. The last four come from plants grown in
soil in a growth chamber after watering is terminated.
Four samplings were taken in a two week period; the first
after wilting was observed and the last, two weeks later,
consisted of live crown and stem tissue (leaf tissue was
yellow and dead). Pirst strand synthesis in this library
was done in the presence of methylated dCTP thereby
protecting from internal cleavage with Notl."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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/db_xref="taxon:4565"
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AUTHORS
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OG3AG53TH ZM_0.7_1.5_KB Zea mays
genomic survey sequence.
CG351928
CG351928.1 GI:34269194
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Whitelaw,C.A., Quackenbush,J., Van Aken,S., Utterback,T.,
Resnick,A., Praser,C.M., Budiman,M.A., Bedell,J.A., Rohlfing,T.,
Citek,R.W., Nunberg,A., Robbins,D. and Lakey,N.
Consortium for Maize Genomics
Unpublished (2002)
Other_GSSs: OG3AG53TV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD clade; Panicoideae; Andropogoneae; Zea.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zea mays
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fax: 301-838-0208
Email: whitelaw@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zea mays
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CGCGCTCGACGCCGACCCTACCCGCTGCCGCTGCTCCCGGGGATGCTGGAGAAGTTCCCCAA
                                                                      GGAGGAGGCGAGCTGGCCCAGGCCGACGTGCAGGACGCCGTGGACAGGGTGCT
                                                                                         ccccgrgcaggccggcccccggccagargcgcgacccccgcggcagcaar
                                                                                                                                                                             CGCCATGCAGATGCTGAAGGACACCATCAACGAGGAGGCCGCCGAGTGGGACCGCCTGCA 638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGATOTÓCCAGOTOCOCOTOGGOGACGGCATOACOCTOTGCCGGCGCGCGCA
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                                CGCCACGCGCCTCTGGAGGCAGCTGGAGCGCGACGTCCGCGCCACGCTGCAGCAGCATCG
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                                                                                                                                                                                                                                                                                                       /clone="ZMMBMa0754J09"
/clone_lib="ZM_0.7_1.5_KB"
/note="Vector: pBCSK-; Site_1: HincII; 0.7-1.5
methylation filtered genomic DNA library"
                                                                                                                                                                                                                                                                                                                                                                            /mol_type="genomic DNA"
/strain="B73"
/db_xref="taxon:4577"
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                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Zea mays"
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                                                                                                                                                                                                                Score 77; DB:
Pred. No. 5.6;
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FGAS016142 Triticum aestivum FGAS:
aestivum cDNA, mRNA sequence.
CK163513
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                                                                                                                         Bioinformatics
University of Saskatchewan, Department of Computer Science
1C101 Engineering Building, 57 Campus Drive, Saskatoon,
Saskatchewan, S7N 5A9, Canada
Tel: 306 966 1769
Fax: 306 966 2033
Email: fgas_ests@cs.usask.ca
This sequence is the direct result of the phred (default parameters). It is the raw identification of the high quality insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Triticum aestivum
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                                                                                                                                                                              <u>AACACCCTCTGGAACGGCTCCGTCGTGCTCCCCGCCGACGCCCCATGCGCAAGTACATC</u>
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/clone lib="Triticum aestivum FGAS: Library 4 Gate 8"
/clone lib="Triticum aestivum FGAS: Library 4 Gate 8"
/note="Organ: Crown and leaf; Vector: pCMV.SPORT6; Aerial
parts (crown and leaf) of wheat cultivar Norstar during
dehydration stress. 8 mRNA populations were combined
before constructing the library. The first four come from
removing plants from vermiculite (7 day old plants) and
incubating them at 20C on the bench without water for 1,
2, 3 and 4 days. The last four come from plants grown in
soil in a growth chamber after watering is terminated.
Four samplings were taken in a two week period; the first
after wilting was observed and the last, two weeks later,
consisted of live crown and stem tissue (leaf tissue was
yellow and dead). First strand synthesis in this library
was done in the presence of methylated dCTP thereby
protecting from internal cleavage with Not1."
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Pred. No. 6.3;
0; Mismatches 303;
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    124 GAGGGCTTCGCCCTGAACCCCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATCATG 183
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Yu,Y., Henry,D., Palmer,M., Rambo,T., Simmons,J., Choi,D.
Penton,R.D., Oates,R. and Main,D.
Development of a genetically and physically anchored EST
for barley genomics: Morex unstressed seedling root cDNA
Unpublished (2001)
On Nov 16, 2000 this sequence version replaced gi:1118860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HVSMBf0019H19f Hordeum vulgare seedling root EST library HVcDNA0007 (Etiolated and unstressed) Hordeum vulgare subsp. vulgare cDNA clone HVSMBf0019H19f, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: 864 bbb wing@clemson.edu
Email: rwing@clemson.edu
Total hq bases = 388
Total hq bases = 388
Seq primer: AATTAACCCTCACTAAAGGG
Seq primer: AATTAACCCTCACTAAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooldeae; Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clemson University Genomics Institute
Clemson University
100 Jordan Hall, Clemson, SC 29634, U
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864 656 4293
                                                      Conservative
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                    /clone lib="Hordeum vulgare seedling root BST library
/clone lib="Hordeum vulgare seedling root BST library
/note="Vector: lambdaZAP; Site 1: EcoR1; Site_2: Xho1;
Seeds were surface sterilized then germinated under axenic
conditions in the dark at room temperature on filter paper
with water, nystatin and cefotaxime in covered
crystallization dishes. Five-day old seedling roots were
then harvested, total RNA was prepared, poly(A) RNA was
purified, one primary unamplified cDNA library was made,
and 1 million pfu were in vivo excised to give pBluescript
SK(-) cDNA phagemids. These steps were performed in the TJ
Close laboratory at the University of California,
Riverside (Choi, Close, Fenton). Phagemids were plated and
picked at the Clemson University Genomics Institute (CUGI)
(Begum, Palmer, Frisch, Atkins and Wing). plasmid DNA
preparations, DNA sequencing and sequence analysis were
performed at CUGI (Wing, Yu, Frisch, Henry, Simmons,
Oates, Rambo, Main). The sequence has been trimmed to
remove vector sequence and contains a minimum of 100 bases
of phred value 20 or above. For more details on library
preparation and sequence analysis see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wing RA
                                                                                                                                                                               http://www.genome.clemson.edu/projects/barley. To order this clone see http://www.genome.clemson.edu/orders Also see Close TJ, Wing R, Kleinhofs A, Wise R (2001) Genetically and physically anchored EST resources for barley genomics. Barley Genetics Newsletter 31:29-30. (http://wheat.pw.usda.gov/ggpages/bgn/31/cover.html) "
                                                                                                                                                                                                                                                                                                                                         preparation and sequence analysis see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="Seedling
/lab_host="TJC121"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          clone="HVSMEf0019H19f"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Hordeum vulgare subsp. vulgare"
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                                                                              5.1%;
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xref="taxon:112509"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   type="mRNA"
                                                    Score 76.4; DB Pred. No. 6.5; 0; Mismatches
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r., Simmons,J., Choi,D.W.,
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                                                                                                                                                          University of Saskatchewan, 1C101 Engineering Building, Saskatchewan, S7N SA9, Canad Tel: 306 966 1769
Pax: 306 966 2033
                                                                                                                                                                                                                                                                                                                                                                Allard, F., Crosby, W.L., Danyluk, J., Budes, F., Frick, M., Gaudet, D., Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A., Links, M.G., McCarthy, B.L., Monroy, A., Muzak, I., Nilson, D., Penniket, C., Roach, J.L. and Sarhan, F.

Punctional Genomics of Abiotic Stress In Wheat and Canola Crops
    Email: fgas_ests@cs.usask.ca
This sequence is the direct result of the Base calling software
Phred (default parameters). It is the raw base calls. To aid in the
identification of the high quality insert the software Lucy
(default parameters) has been run on this sequence. Lucy identified
the region [128,636].
                                                                                                                                                                                                                                                                                                                  Unpublished (2003)
Contact: Wm L Crosby
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.
1 (bases 1 to 869)
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Triticum aestivum
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57 Campus I
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RESULT 14
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                        DEFINITION ACCESSION
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Best Local Similarity 45.2%;
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AY104577 1308 bp
Zea mays PCO137756 mRNA sequence.
AY104577
AY104577.1 GI:21207655
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/lab host="DH5 alpha"
/clone lib="Triticum aestivum FGAS: Talt5"
/clone lib="Triticum aestivum FGAS: Talt5"
/note="Torgan: Crown; Vector: pGEM-T; SSH (suppression subtractive hybridization) cDNA library from genotype PI178383 cold hardened at 2 C for 21 days and 49 days (equal amount of cDNA pooled together before subtraction, tester) and subtracted against genotype Norstar cold hardened at 2 C for 1 day (24 H) (driver). Modified Smart cDNA (Clontech) priming and non-directional cloning"
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/cultivar="Wheat line PI 178383"
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TITLE
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Best Local :
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1 (bases 1 to 1308)

Hainey, C.F., Dolan, M., Miao, G.H., Vogel, J.M., Whitsitt, M.S., Arthur, L.W., Hanafey, M., Morgante, M. and Tingey, S.V.

Maize Mapping Project/DuPont Consensus Sequences for Design o Overgo Probes
Unpublished (2002)

2 (bases 1 to 1308)
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If you are interested in getting corresponding physical clones, these are publicly available from ZmDB and may be found by BLAST searching at MSL, maizemap.org; ZmDB, www.zmdb.iastate.edu; TIGR, www.tigr.org; or NCBI, www.ncbi.nlm.nih.gov. When the source of twww.tcpnaisecDNA sequences is either Virginia Walbot, Stanford or Pat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schnable, Iowa State, then clones may be requested from ZmDB:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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 CACCCTGCAGGAGCAGATCGCCTGGATGACCAGCAACCCCCCGTGCCCGTGGGCGACAT
                                                                                                                                 CCAGCGCATGAAGAACTACACCATCTACGCCGTGTCCATCACCATCCGCATCGTGCTGGG
                                                                                                                                                                                                                                                                                                                                                GAAGGCCTTCAGCCCCGAGGTGATCCCCCATGTTCACCGCCCTGAGCGAGGGGCGCCACCCC 533
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                                             CTTCCTGCTCGTCGCGCTCTGGAAGTTCGACTTCGCGCCCTTCATGGTGCTCATCAT
                                                                                       CCCCGTGGCCCCGGCCAGATGCGCGACCCCCCGCGGCAGCGACATCGCCGGCGCCCACCAG 713
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /mol_type="mRNA"
/db_xref="MalzeDB:638085"
/db_xref="taxon:4577"
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OG2BH19TV ZM_0.7_1.5_KB Zea m genomic survey sequence. 
CG274385 CG274385.1 GI:34186526 GSS.
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Zea mays
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Zea.
1 (bases 1 to 883)
Whitelaw, C.A., Quackenbush, J., Van Aken, S., Utterback, T.,
Resnick, A., Fraser, C.M., Budiman, M.A., Bedell, J.A., Rohlfing, T.,
Citek, R.W., Nunberg, A., Robbins, D. and Lakey, N.
Consortium for Maize Genomics
Unpublished (2002)
Other GSSs: OG2BH19TH
Contact: Cathy Whitelaw
                                                                                                                                                                                                                                                                                                    GCAGGAGCCCAAGGACCGCGAG 1446
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Best Local Similarity
Matches 303; Conserv
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Tel: 301-838-5843
Fax: 301-838-0208
Email: whitelaw@tigr.org
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                                 AGGACTGCACCGAGCGCCAGGCCAACTTCCTGGGCAAGATCTGGC
                                                                                                        ACTGCCGCGCCCCCGCAAGAAGGGCTGCTGGAAGTGCGGCAAGGAGGGCCCACCAGATGA 1258
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/clone="ZMMBMa0752C14"
/clone_lib="ZM_0.7_1.5_KB"
/note="Vector:_pBCSK-;_Site_1: HincII;
methylation filtered genomic DNA librar
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/mol_type="genomic Di
/strain="B73"
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June 14:10:55